

FIELD NOTES

JUNE 23, 1909, to

AUGUST 21, 1909

From west side of delta of Colville River, Arctic coast of Alaska; up the Colville to mouth of Itkillik River; down Colville to Beechey Point; east to Flaxman Island and Demarcation Point, Alaska, and Herschel Island, Yukon Territory, Canada.

By Rudolph M. Anderson

For American Museum of Natural History, New York City.

BOOK IV.

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From west side of delta of Colville River, Arctic coast of Alaska, up the Colville to mouth of Itkillik river; down Colville (east branch) to Beechey Point, and east to Flaxman Island, Alaska, and Demarcation Point, Alaska, and Herschel Island, Yukon Territory, Canada.

By Rudolph M. Anderson
American Museum of Natural History
77th Street and Central Park West
New York City, U. S. A.

BOOK II.

1909

CAMP ABOUT 7 MILES WEST OF COLVILLE RIVER DELTA, ALASKA
June 23, 1909 (Wednesday)

Weather:

M. T. --38° F. --52° at 7:00 a. m. --59° (in sun)
at 12 m. --51° (in sun) at 1:30 p. m. Wind from S.E. 9:00
a. m. to 12:00 m. Cloudy, with N.E. wind after 4:00 p. m.

Pectoral Sandpiper:

Went out in morning and took set of Pectoral Sandpiper (*Tringa maculata* #30/2) from nest found last night; two eggs, with well-formed embryos. Shot ♀ bird as she fluttered away from nest (#277. ♀ *Tringa maculata*). She would have laid no more eggs for some time, as eggs in ovary were very small. Nest composed of a very few dead leaves and grasses lining a little depression in the ground; well-concealed by grasses 8-10 inches high bending over nest. Although I saw ♀ fly from nest, and had placed a stick about six feet from the nest last night, I could not find it again until I had looked closely for some time. The ♀ Pectoral Sandpiper does not have the swollen neck and breast which the ♂ has at this season.

Lapland Longspur:

Went out with V. Stefansson to gather in two nests of Lapland Longspur which he had found earlier in the morning. Flushed ♀ Longspur (*Calcarius lapponicus*) from nest in each case, and also saw the ♂'s around nest. The first nest (Set 31/4), four fresh eggs, was placed in the side of a little hummock of turf and well arched over; composed of grasses and moss, lined with fine grass and feathers; situated near foot of hill about 1/4 mile from coast.

Second nest (Set 32/5), five slightly incubated eggs, on dry ground, near top of high mud bank overlooking beach, scarcely concealed by short grass, growing in small patches from smooth, gray moss-covered bank. Saw ♀ Longspur sitting on nest when I was only about eight feet from nest.

Willow Ptarmigan:

Went to a little patch of dwarf willows where V. S. had seen a pair of Willow Ptarmigan earlier. We soon saw the male and when S. shot at it, the female flew up from near his feet. We could find no nest, however.

Hutchins's Goose:

A flock of 12 Hutchins Geese (Branta canadensis hutchinsii) alighted on tundra near coast, and crawling up behind a little range, fired together killing two at 57 and 60 yards respectively. #279, ♂ B. canadensis hutchinsii, L. 30 1/4; W. 16 1/2; T. 5 1/4; B. (culmen) 1 3/4; (B. (depth) 1 1/16; Ts. 3 1/8; Tcl. 3 1/4: Bare portion of tibia, 3 in. Tail 18, feathered. Bill and feet black; iris brown. White cheek patches separated by 1/4 in., wide median stripe of small, short black streaks. Testes very small for season).

Travel:

Loaded all our goods on umiak for first time, about two tons, including people. Boat draws less than one foot of water loaded. Took photo of same (loaded). #111 Umiak, facing west 8-1/100. Bright sunshine, 11.00 a.m. Started east, following a narrow lead of shore water for about two miles, and were compelled to stop by shoal water over sunken ice, about 12.30 p.m. Plenty of driftwood all along this portion of coast. Very little water upon ice outside. Many Blue-bottle flies numerous around tent today.

Black Brant.

Found a nest of Black Brant (Branta nigricans) containing five fresh eggs (Set 33/5) near edge of a small lake. The Brant was seen on the nest. Nest composed of a mass of gray down lining, a little hollow in the ground. Many Brants seen but only one nest found.

June 24, 1909, (Thursday).

Weather:

+36° at 9.00 a.m. Slight rain at intervals after 6.00 a.m. Light south-west wind from 6.00 a.m. until 12 m., when wind shifted to north-east. Cloudy most of day, but bright sunshine all the time after 6.00 p.m.

Travel:

Started east with loaded umiak at 3.45 p.m. I followed shore to hunt and bring dogs along; other people in boat. Followed a narrow lead of shore water around a little bay, lined with much drift-wood. In some places water free from ice near shore, but in some places ice lay on bottom, under water. In two instances the boat was forced through masses of floating rotten ice by breaking up the masses with paddles. Found wider area (ca 1/4 - 1/2 mi.) of open water about 3 miles further on, but too shallow for heavy boat, so we put back and made camp at 11.30 p.m. at a little headland near the last available camping site with wood at mouth of a little creek.

Willow Ptarmigan:

Saw male and female Willow Ptarmigan, and dogs apparently found nest as I saw freshly broken egg. Shells on the ground.

Snow Bunting:

Snow Buntings were numerous everywhere among the piles of driftwood on beach, but seldom far from the coast.

Travel:

General trend of coast west - 234° by prismatic compass.

Snow Bunting:

Searched in vain through a large patch of drift logs for a nest of Snow Bunting although both male and female were hopping about not far away. Went about 75 yards away and sat down to watch. Within five minutes the female returned to the pile, and slipped out of sight. Running up to the immediate vicinity yelling, the bird slipped out from behind a large log, and a little search disclosed her nest, on ground between two large logs, upon which a third smaller log had lodged roofing over the space between the logs, and giving the bird access from either end. Nest contained five fresh eggs. Nest composed externally of wrotten moss and grass, lined with fine grass and a few feathers. Set 34/5 Plectrophenax nivalis.

About a mile further, my dogs, running ahead flushed a female Snowflake from the end of a hollow log, and chased madly after her. Nest placed in a rotted-out hollow, about 8 inches deep in end of a hollow driftwood log. Set 35/6. Nest much better built than preceding one, with more moss outside, and more feathers inside.

Willow Ptarmigan:

Saw male and female Willow Ptarmigan on low hill near coast, and dogs evidently found nest, as I saw freshly broken Ptarmigan egg on ground.

Saw many Old-squaws, a few Black Brant and American White-fronted Geese, one Hutchin's Goose, a few S. gulls, & several large gulls.

Parasitic Jaeger:

Went out shortly before midnight and sighted a bird (with field-glasses) sitting on nest, taking it to be a Loon, at a distance, but found out later it was a Parasitic Jaeger's nest, with two eggs.

Mosquito:

He also brought in the first Mosquito, -(Eskimo name Kik-to-ri-ak) we have seen this season.

Musk-ox:

Found part of an old Musk-ox skull (frontal bones, base of skull, and part of each horn-core), water-logged and green with moss, half buried in mud of bog, about three feet from bank, near mouth of little creek about two miles west of western mouth of Colville River.

June 25, 1909 (Friday).

Weather:

+ 38 at 10.30 p.m. + 42° at 2.00 p.m. north-east wind.

Travel:

Dog waded out and chewed up a caribou fawn's skull on boat during night, also a few leg bones.

Started east with half a load at 2. p.m. to explore channels. Were obliged to get out of boat and drag it over shoals several times before we struck a deeper channel, with slight current seaward and soon passing between extensive mud flats, entered the western branch of the Colville. Landed on shore of a little lagoon and separated in order to explore on foot. Stefansson and Billy saw some people who were camped on another branch about 1 1/2 miles to east. Billy was unable to cross river but talked with people across. Retraced our course about 1/2 mile and ascended the other tracking up stream with dogs. Eight people were camped there, two men, one woman, 1 boy, three girls and a small child, who had come from the main camp at Niralek that morning to fish. They said all the Colville river people (nine umiaks) had recently come down to Niralek to fish. They had all been more or less hungry, and were now out of tea, but nobody had starved to death on the Colville the past winter (unusual for the Colville). They told us that the best route to Niialek was up this channel and down another channel, as the water was too shallow outside the mud-flats. They had caught a number of white-fish already and gave us about a dozen, and we gave them about 1/2 lb. of tea. Cached our load here and returned to old camp with empty boat.

Hunted for a couple of hours to southward over level delta flats but saw only a few White-fronted geese, a few Spectacled Eiders and Old-Squaws, numbers of King Eider, Lapland Longspurs. Saw several Snowflakes around driftwood patches, but could find no nests.

Snowy Owl, Pectoral Sandpiper:

Flushed a female Pectoral Sandpiper, which was soon joined by the male bird, acting as if they had a nest near a small lake, but I could not find it, although I hid for

half an hour behind a little ridge, and returned flushing the birds at same place.

Snowy Owl:

One Snowy Owl seen sitting on tundra.

Whistling Swan:

After lunch I struck out again, and soon saw a white bird moving on the opposite bank of a lake about half a mile across. A slight mirage made the bird look like a Ptarmigan but I finally assured myself that it was a Whistling Swan walking about. Looking again, with the glasses, I saw the bird (or its mate) sitting on top of a large black spot (apparently a mass of earth), with head erect and neck slightly curved. I started around the north end of lake and after encircling an almost interminable chain of connected lakes and ponds, was able to look across an arm of the lake and see the Swan leave her nest (about 200 yards from me), on a little narrow peninsula and disappear over a little ridge. Soon I saw the pair of Swans (one pure white, the other slightly grayish) walking slowly away, about 200 yards distant. They remained at this distance all the time I was near the nest feeding, apparently unconcerned. The nest was on a very narrow peninsula and almost inaccessible. It was about ten feet from the water of lake and base about four feet above water level. Solid ice across lake except 10-30 yards around edge. Water of small pond a few yards on other side of nest. Base of nest about 7 feet across, about 18 inches high, and 24 inches across depression at top. Bulk of nest composed of small blocks and chunks of moss, evidently broken up piecemeal by the birds into bits about 1 1/2 or 2 inches square and partially dried. On top of this foundation a thick circular mass of grass and weed stalks, mixed with a few feathers and white down. A considerable amount of down and feathers were lodged on grass stalks for 15-20 feet to leeward of the nest. No attempt was made at concealment, and the dark moss of the nest loomed up so conspicuously against the dead grass that at 50 yards I doubted whether it was a nest after all. Nest contained five eggs - four or five days incubation. Set 36/5. Color, - pale yellowish buff or ecru, unmarked; nearly alliptical in shape. (Olor columbianus).

White-fronted Goose:

Shot one pair of Old-squaws, V.S. shot an American White-fronted Goose and

Spectacled Eider:

Shot a pair of Spectacled Eiders. Saw many Spectacled Eiders in small ponds.

King Eider:

Saw one male King Eider with seven females on a little island.

Red Phalaropes:

Red Phalaropes very numerous.

Northern Phalarope:

Northern Phalarope scarce.

Jaegers and Gulls:

A few Jaegers and Gulls. Saw one apparently new Gull's nest on a small island, but inaccessible, birds hovering overhead.

Pacific Loon:

Pacific Loons on several ponds.

June 26, 1909 (Saturday).

Weather:

+ 43° at 11.30 a.m. North-east wind. Light sprinkle of rain from midnight to 2.00 a.m. Foggy on delta flats in morning. Bright sunshine after 10.00 a.m.

Loon:

Saw a pair of Black-throated Loons swim out from near a little island and wading out, I found an apparently new nest but no eggs.

Pintail:

Found two nests of Pintail (Dafila acuta), each with two fresh eggs, about 15 feet apart on a little island in a pond.

Arctic Tern:

A small colony of Arctic Terns were hovering around a little lake, but no nests were apparent.

Whistling Swan:

A single Swan was seen circling about, and crying out "Kog-ruk", continuously about 5 a.m., about a mile from where I had taken the Swan's eggs a few hours before. At the same time another pair of Swans alighted in a wide part of river about 1/4 mile away, (three Swans in sight at once, - went after them with a rifle, fired twice, but missed..

Semipalmated Sandpiper:

Found a Semipalmated Sandpiper's nest with three eggs Set 37/3 about one-third incubated, on ground about 30 yards from river. Shot both parents, who were running nervously about, peeping, keeping about 50 yards away. Female flushed from nest. (x) ♂ L.6 1/4; W. 3 3/4; T. 1 11/16; B. 11/16:

King Island:

Saw one King Island with seven females on a little island.

Red Phalarope:

Red Phalarope very numerous.

Northern Phalarope:

Northern Phalarope scarce.

Jaegers and Gulls:

A few Jaegers and Gulls. Saw one apparently new Gull nest on a small island, but inaccessible. Birds hovering overhead.

Facile Island:

Facile Island on several islands.

June 22, 1902 (Wednesday):

Weather:

+ 45° at 11.30 a.m. Four-sevenths light variable of rain from midnight to 1.30 a.m. Foggy on Belle Isle in morning. Bright sunshine after 10.00 a.m.

Island:

Saw a pair of Black-bellied Loons swim out from near a little island and waving out. I found an apparently new nest but no eggs.

Islands:

Found two nests of Kittiwake (Facile species), each with two fresh eggs, about 15 feet apart on a little island in a pond.

Facile Island:

A small colony of Arctic Terns were hovering around a little lake, but no nests were apparent.

Whale Island:

A high tower was seen situated about 1/2 mile out from shore, considerably about 2 a.m. about a mile from where I had taken the boat. A few terns were at the same time another part of island situated in a wide part of river about 1/2 mile away. (There were in sight of birds - some after then with a little, but none were apparent.)

Whale Island:

Found a single-nested Blackbird's nest with three eggs set 2 1/2 inches apart on ground about 20 yards from river. About 10 feet from river. The nest was situated about 10 feet from river. The nest was situated about 10 feet from river. (The nest was in sight of birds - some after then with a little, but none were apparent.)

Ts. 7/8; Tcl. 7/8. #280 ♀ Semipalmated Sandpiper, - L. 6 5/16
W. 3 13/16; T. 1 7/8; B. 13/16; Ts. 15/16; Tcl. 15/16.
Very slight trace of ochraceous on tips of secondaries only.

Travel:

Trip home to old camp took from 7.15 to 10.45 a.m. with empty boat. Mud flats steaming in hot sun, causing much fog until after 9.00 a.m., and bad mirage after that. Turned in about noon after being up 29 hours and slept for 10 hours. Took umiak out of water and dried her meanwhile.

June 27th, 1909 (Sunday).

Weather:

M.T. + 36 + 42 at 3 a.m. Up shortly after midnight. Clear bright sunshine until about 6.00 p.m. Went out with V.S.

Parasitic Jaeger:

Went out with V.S. for Parasitic Jaeger's nest (found June 24th). Both parents began to circle around the vicinity of nest screaming as we approached, sometimes alighting for a minute or two. As Stefansson came about 50 yards of nest, they came over him and he dropped both of them. Eskimo name I-sung-ak. #281 ♀ *S. parasiticus* L. 21 3/4; W. 13 3/8; T. 9 3/8 (white) #282 ♂ *S. parasiticus* L. 21 1/2; W. 13 3/4; T. 9 3/8 (dark). The nest contained two dark colored eggs (as before) Set 38/2, slightly incubated. Nest a mere depression in wet green moss with a few bits of loose moss on sides on tip of a narrow little peninsula projecting into a small pond about 1/2 mile from coast. Nest only 4-5 inches above water level.

Red Phalarope:

Going back we flushed a male Red Phalarope from a nest on a little ridge about 10 inches above general tundra level, well concealed by grasses. Shot male(x). Four eggs, set 39/4, incubation begun.

Black Brant:

Stopped about 11 a.m., on delta flats to boil tea, after a vain chase after a flock of about 150 Black Brants which were feeding on the low flat ground.

Mosquitoes:

Mosquitoes appeared here in numbers for the first time.

Lapland Longspur:

Found a Lapland Longspur's nest in a little bunch of grass about 100 yards from the river; four young birds and one egg, the first young birds of the season.

Travel:

The season seems to be more advanced as we proceed into the delta. Yesterday we dug a hole in ground a little way from river, through fine sandy silt soil, and found it unfrozen to a depth of 16 inches. On the tundra a few miles west the ground is frozen 4-5 inches below surface.

Black-bellied Plover:

Stopped again a little further up stream at a broad, sandy and muddy flat below a high cut bank where we had seen a Black-bellied Plover and some Ruddy Turnstones, acting very suspiciously yesterday. Although we approached the spot very cautiously today one of the Plovers gave the alarm note before we were within 200 yards of the bank (river forks here). Eskimo named Black-bellied Plover "Tu-lik". When we landed both Plovers were running away very rapidly stopping occasionally to look around. They seemed very anxious to lead us away and one would keep a straight line as long as I followed it, but generally circled about, often uttering a mellow Tu-li-u note, and returned when I reached the suspected nesting site, always keeping well out of shot-gun range. The ground here was perfectly level, sandy silt, about 6 feet above river level, and sparsely covered with small patches of short grass tufts and little weeds, affording no concealment for nests. V. S. and I started to search the ground over carefully, walking parallel to river and I soon found the nest, with two eggs, about one-half incubated Set 40/2. Nest was only a very shallow depression in the ground, about four inches across, one inch deep; 50 yards from river composed of a very few bits of grass and a few small dead willow leaflets. Although I could not shoot the birds, I watched them for a long time through field-glasses at from 75 to 100 yards. Watched them for more than half an hour from a little ridge about 1/4 mile away, and although one bird approached the near vicinity of the nest, she did not sit down.

Longspur:

While searching for the Plover's nest V.S. found a Lapland Longspur's nest with four eggs, and I found a nest with four eggs unknown to me.

Ruddy Turnstone:

No birds were visible except some Turnstones, a Pectoral Sandpiper and some small Sandpipers on shore of a little pond not far away. I lay down in grass about 150 yards away, and in about ten minutes saw a Ruddy Turnstone sneaking through the grass towards the nest, finally disappearing from sight. I approached the nest cautiously under shelter of river bank, but the bird took alarm before I could get very near, sneaked off quietly through the grass and ran off across a mud flat

to the pond. I concealed myself again, and the bird returned to the nest within five minutes. She ran off again as I approached but I succeeded in shooting her. #283 ♀ R. Turnstone, four eggs. Set 41/4 incubation advanced. Nest composed of a few bits of grass and leaves, lining a little hollow about three inches across in the flat sandy ground, about 50 yards from river, partially concealed by a thin clump of grass. Male bird also seen.

In the meantime, Stefansson had been looking for the nest of another pair of Turnstones, which had been making great demonstrations in the immediate vicinity of the Black-bellied Plover's nest, the female especially nervous, continually uttering tee-wee, tee-wee, tee-wee-ee. The male bird also remained near by. We had both searched this ground over several times carefully while looking for the Plover's nest, but V. S. went over the ground again setting up sticks at right angles to river bank, and moving sticks ahead as he finished searching the ground over. All this searching revealed nothing, although we were certain the birds were nesting there. After half an hour had elapsed he returned to the spot, and accidentally stumbled onto the eggs, in plain view, about 50 from the Plover's nest. I came up soon and decided to photograph the nest. V.S. waited about 20 feet from the nest while I went for camera and female bird returned without fear and sat down on nest. Focused camera on nest at six feet and lay down behind it. The female bird ran around me two or three times, then deliberately walked up to nest and sat down, flying off when I pressed the shutter bulb. I re-set camera and took another picture at same distance, standing beside nest. Took one picture at three feet with portrait lens, and three at two feet eight inches, the bird returning to the nest within a few minutes after each exposure. As I had only a short rubber tube for the compressing bulb, I had to lie directly behind the camera with my hand at one side of camera. The bird paid no attention to the click of the shutter, but flew off whenever I tried to turn on another film. The mosquitoes were very troublesome and although I was often obliged to raise my hand to brush off mosquitoes, while bird was within three feet of me, she did not take alarm. Often while on the nest or walking the bird would turn her head to snap at mosquitoes.

Parasitic Jaeger:

Once, before we found the nest, a Parasitic Jaeger flew over and both Turnstones, attacked it fiercely, flying at the Jaeger from sides and rear, screaming loudly until the Jaeger took safety in hasty flight.

Travel:

A number of Sabine (?) Gulls, Arctic Terns, Pectoral Sandpipers, Semipalmated Sandpipers.

Reached the new cache on Ikalokpik branch of Colville about 7.00 p.m. Eight Eskimos camped here, widow named Keruk and baby with umiak, - son of Panniyulak, his wife Dukkayak, Arragaigat, (Akpik's sister), two young girls and one boy.

June 28th, 1909 (Monday).

Weather:

M.T. + 45°. +53° at 12.30 p.m. Cloudy. Wind from northwest. Wind changed to northeast at 3.00 p.m. + 48° at 6.00 p.m.

Red Phalarope:

Boy brought in five eggs of "Aukpilaktok" (Red Phalarope, two eggs broken from first set of four eggs; and one egg left in second nest, and snare set to catch the bird; eggs all fresh. A

Lapland Longspur:

A set of Lapland Longspur four eggs incubation begun Set 44/4 was taken near camp.

Willow Ptarmigan:

Willow Ptarmigan were fairly common along bank of river here, the bank being composed of little rounded hills, with a dense growth of spreading ground willows from 6-12 inches high, forming a thick tangle under foot in some places. One nest of beautifully marked eggs, eight in number, incubation begun, was found in the morning in thick grass at edge of willows about 100 yards from river, female on nest, Set. 43/9.

Longspur:

In the evening I flushed a female Lapland Longspur from a nest in tall grass near pond, containing three eggs, which I left. Billy found a Longspur's (Put-u-ki-lak) nest today with young birds, and one of the boys found one also with young birds.

Caribou:

About 11.00 p.m. Stefansson sighted three caribou about a mile away, on a low hill across the river, moving slowly westward. Three of us, V.S., Billy and I crossed river in umiak and went after them.

Eiders:

Several large flocks of Eider Ducks flew very near

us as we were crossing the tundra.

Pectoral Sandpiper:

I flushed a female Pectoral Sandpiper, which acted as though she might have a nest near by, but we did not have time to look for it.

Black-bellied Plovers;

Saw pair Black-bellied Plovers.

June 29th, 1909 (Tuesday).

Weather:

+ 60° at 6.00 p.m. Day began with cloudy weather at midnight, but air clear. Light northeast wind. Dense fog came up from seaward about 12.30 a.m. and lasted until 3.00 a.m. after which sun came out brightly and the day was very hot, although there was a stiff northeast wind. Cloudy again after 4.00 p.m.

Caribou:

After going about a mile east from camp, we ascended a little hill and again saw the caribou, who were wandering aimlessly about, occasionally stopping to feed a little. Billy and I started down along a little creek or "suy" of the river, while Stefansson was to work up slowly from the south-westward. We had not gone very far, had seen the caribou standing still about 500 yards away, and started to work nearer behind a little ridge. Before we had got around a dense fog suddenly enveloped us, coming in from seaward. The deer evidently got our scent very soon for we could not find them. The fog prevented us from seeing more than 150 yards. Soon we heard 9-10 shots apparently a few hundred yards away (really 1 2 a mile). When they ceased we started in their direction, but had not gone very far, when another fusillade began, and bullets began to sing over our heads, compelling us to lie down in a little ditch until the firing ceased. Stefansson had met the three caribou coming toward him in the fog and killed all, at distances averaging about 200 yards (paced). He had estimated the range at 300 yards and all bullets struck high or went over. One deer was struck four times, (1st) through tip of one ear, (2nd) struck interior to lower end of left scapula, out upper border right scapula making large hole. (3rd) struck top of left scapula, and passed at about 3 inches further to right at top of right shoulder near exit of 2nd; (4th) struck just anterior to anterior border right ilium, and passed out two inches anterior and two inches to left of base of tail. A large mass of small intestines was protruding from hole when

this bullet went out (intestines unbroken, but mesentery perforated). All the three caribou were females one year old with short velvet-covered horns. Caribou of this age either sex are called Ang-a yux-kle-a-rut by Port Clarence people (according to Billy) and Ang-a-yuk-suk by the Nunatamis. The caribou were in fair condition, having a little fat on back and around intestines. The skins were in very poor condition, the old hair having been shed in quantities leaving bare patches on neck, jaws, head, ears while the new hair was so short as to be barely visible. The old hair remaining was very loose and came out in bunches wherever it was handled roughly. One animal had the skull nearly blown to pieces, and was valueless as a specimen, but I preserved two skins with skulls. Measured all three:-

		31312. Spec. #284 ♀	31313. #285 ♀
Length (tip of nose to tip of tail)	68 1/2	67	66 1/2
Tail.	7	6 1/2	6
Height at shoulders	36	35 1/2	36 1/2
Depth chest	16	16 1/2	17
Shoulder to hip (Hum. to Fem.)	35	31	33
Girth neck (behind ears)	14	15	14
" " (front of shoulders)	18	20	21
" chest	38	39	39
" belly (greatest circum.)	50	47	48
" loins	39	40	41
" hind leg	18	20	21
" fore-leg	11 1/2	12	12

I remained to measure and skin the three caribou while V.S. and Billy went back to camp and brought the boat by a round-about course, within 25 yards of the carcasses, the trip taking them from 1.00 to 5.30 a.m.

Mosquitoes:

Mosquitoes were very bad, as the deer were on very flat delta land near the coast. Reached camp about 8.00 a.m. and slept all day. Finished skinning ears, lips and feet in evening and next morning.

Northern Phalarope:

Flushed a male Northern Phalarope (P. lobatus) from nest on a little isthmus between two lakes. The bird fluttered off the nest into the water and began swimming about near the shore, peeping occasionally. Four fresh eggs, Set 45/4. Nest composed of a few bits of grass lining, little hollow in the moss, partially concealed

by grass blades about three inches across, $1\frac{1}{2}$ inch deep. A set of Red Phalaropes eggs (*C. fulicarias*) was taken from a nest on a small hummock near end of lake, incubation begun, Set 46/4. Bird was flushed twice from nest, but I could not tell whether it was the male or female. Both parent birds were running about near the nest. The bird flew from the nest when I was about 10 yards away. A Red Phalarope's nest was found about 50 yards from our tent today. The bird was very wild and would fly directly up from the nest and go at least 100 yards before alighting, if anyone came out of the tent and walked half a dozen paces in the direction of the nest. Looked at the nest several times, but on only one occasion could I make sure that the male bird was sitting on the nest.

Spermophile:

A Spermophile was seen on river bank near camp and Billy set two traps but caught nothing. Several were seen on pings across the river.

June 30th (Wednesday).

Weather:

+52° at 12 m. Wind southwest.

Caribou:

Inniut at camp 400 yards up the river saw two deer (female with fawn) and heard four shots, but could not tell whether deer were hit.

Four people (two tents) are camped on another branch of the river a mile or two further up.

Several Marmots seen near camp and Stefansson shot one female, #304 Spermophilus parryi; female 445-128-63 Colville delta, 6-30-09.

Spectacled Eiders:

V.S. went out hunting and returned after shooting three female Spectacled Eiders. He had also found two Phalarope's nests and one of Hutchin's Goose.

Hutchin's Goose:

V.S. also found one nest of Hutchin's Goose. He saw the goose with field-glasses sitting on her nest on a little island but she flew away when he came near. The water was too deep for him to wade out, although he could see the eggs. We at once went out together and saw the two geese (*B. canadensis hutchinsii*) in grass on mainland about 50 yards from nest. They flew across the lake, about 350 yards. We returned about an hour later, and wounded one of the geese, but could not catch her. The

nest was on a little island of peat about six feet in diameter flat and top about one foot above water level, 15 yards, from mainland. Nest a mass of grass and coarse weed-stems arranged in a circular form on the ground, lined with finer grass and much light gray down; about 18 inches in diameter, two inches deep (inside). Five eggs, incubation slight about four days. Set 51/5, B. c hutchinsii (Ex-rau-til-ik).

Semipalmated Sandpiper:

Spent some time looking for the nest of a Western Semipalmated Sandpiper on a little ridge near the Goose's nest, but could not find it. The bird kept running nervously about, "peeping". Took a set of the same species on the other side of the lake, about 1/4 mile away, which V.S. had found and marked. Set 50/4, incubation slight. Saw no signs of the bird the first time we came there, but returned again 15 minutes later, flushed the female from nest and shot her. Female, - L. 6 1/16 W. 3 5/8; T. 1 3/4; B. 11/16; Ts. 15/16; Rcl. 13/16. Nest on a little ridge in tundra between two lakes, about three inches across; one inch deep, composed of a few small dead leaves and bits of grass lining a hollow in a bunch of moss. Bird known here as Li-wa-li-wak; Nu-wi-hluk (Port Clarence).

Red Phalarope:

Took another nest of Red Phalarope Set 48/4, four eggs, incubation begun. Saw male bird sitting on nest at distance of five feet. When I tried to come nearer he fluttered about ten feet away and crouched down in the grass with feathers ruffled out. Nest about three inches across, one inch deep, composed of fine grasses and a few leaves lining a little hollow in low wet tundra near a small lake.

Northern Phalarope:

The next nest, Northern Phalarope Set 49/4, four incubated eggs, was found yesterday morning. Flushed parent bird (sex ?) from nest. It was immediately joined by its mate and they remained within fifty yards, while we were near the nest. Nest composed of a few grasses and leaves lining a little hollow in low mossy tundra between two ponds, about three inches across, one inch deep. There seemed to be quite a little colony of Northern Phalarope, Ka-yi-ro-tit, in this vicinity, 8-10 pairs being seen. I found my other nest near here yesterday. The Northern Phalarope seems to be much less common than the Red Phalarope (at least 1 to 20) and locally distributed, while the Red Phalaropes are everywhere.

Red Phalarope:

Shortly before reaching camp we found another Red

Phalarope's nest, Set 52/3, three slightly incubated eggs by flushing male from nest in a bunch of grass at edge of a little grassy marsh. Nest a few grasses, lining a little hollow in the ground, partially concealed by long dead grass.

Collected in the set of Red Phalarope, Set 47/4, found yesterday near camp. Four slightly incubated eggs, male flushed from nest several times; very wary, flying directly away whenever nest was approached. Nest on flat, grassy, tundra, about 50 yards from river channel. It is a wonder that the dogs have not found the nest as they have been continually running across the nest during the three days we have camped here, and have often chased the bird. The dogs are continually searching for eggs, etc., but always chase madly after any bird that flutters along the ground, and are generally led away from the nest. The bird's simplest decoy moves seem to fool the dogs completely, although they only serve to help a man find the nest.

Black-bellied Plover:

V.S. killed #286 ♂ Black-bellied Plover, also male and female King Eider. Saw one other Black-bellied Plover flying about over a long ridge across river from camp, but the bird was too wary for me to approach.

Weather:

Cloudy all day + 43 at 11.45 p.m. Sun came out about midnight. Slight rain from 6.00 to 10.00 p.m. Broke camp about 7.00 p.m.

Travel:

Started for Niralik. The Eskimos here accompanied us, taking part of our cargo in their umiak. Shortly after starting, the wind caught their sail too strongly, they tried to swing around and lower sail, but their mast snapped off before they could lower. Our boat, (having no sail) was being towed and jammed into bank pretty hard before we could stop her. Followed broad winding channel into a broad estuary about two miles west of Niralik. Strong south-west wind made sea run pretty high, and we shipped considerable water before we landed on east side. Had to carry half of load ashore through 50 yards of mud and water before we could drag boat nearer to shore and unload the rest. Bay very shallow. Dogs had much difficulty in swimming across and Stefansson had to go two or three miles around bay after "Lindy" and "Whisky".

Saw two flocks of Hutchin's Geese, several Ruddy Turnstones, Lapland Longspurs, Pectoral Sandpipers, Semipalmated Sandpipers on flats near mouth of river.

Considerable large drift timber on east bank of estuary. Tried to row empty umiak across for dogs, but could make no headway against wind - 4 men paddling.

July 1st, 1909 (Thursday).

Weather:

+ M.T. + 34°. + 36° at 5.30 a.m. + 38 1/2 at 1.00 a.m. Wind south west all night. Snow for a little while about 4.00 a.m. + 51° (in sun) at 2.00 p.m. Very light northeast wind in afternoon. Stefansson returned to camp about 4.00 a.m. bringing the two dogs, which he had found wandering about chasing geese. He killed one Loon.

Pacific Loon:

#287 ♀ Pacific Loon, Gavia pacifica (Ovaries small). The Black-throated Loon is called Mal-le-re. Red-throated Loon Kax-a-rauk. Yellow-throated Loon Tuh-lik.

Pectoral Sandpiper:

Got a set of Pectoral Sandpiper, Set 53-4, four eggs, slightly incubated. Nest on point of low land in delta bay; composed of a few grasses lining a little hollow in the ground. Parent birds seen several times near nest. Called Nu-vak-e-ruk.

Red Phalarope:

Set of Red Phalarope 54/4, taken by V.S. incubation begun, bird flushed from nest on low, boggy tundra ground, a few fine grasses and leaves lining on little hollow in the ground. Two eggs accidentally broken.

Semipalmated Sandpiper:

Flushed a Semipalmated Sandpiper two or three times while walking along edge of little ridge, at head of tide flat, where most of driftwood was lodged. Searched in vain for nest, but little boy found and showed it to me later. Flushed female from nest and shot her. L. 6 1/8; W. 3 13/16; T. 1 13/16; B. 3/4; Ts. 13/16; Tcl. 1 13/16, very slight tint of ochraceous on tips of secondaries. Four eggs in nest, incubation far advanced, and egg-shells very thin and brittle. Nest a slight hollow in dry mossy ground. Took photo of nest #8 N/4 eggs, 11 1/50 - B.s. 2 p.m. Portrait lens.

Snow Bunting:

Looked into hole in end of a large rotting driftwood log, and saw a female Snowflake sitting on her

nest about three feet from end of log. I tried to break off part of end of log to get at the nest, and the female bird slipped off and retreated a little way behind the nest, revealing four or five open-mouthed young birds.

Black Brant:

Large flock of Black Brants flew over in morning. Bright sunshine all day until about 8.00 p.m.

Travel:

The large Eskimo village of Niralik is plainly visible about two or three miles across the land to eastward on another branch of river, about two or three hours walk, but to reach by boat it was necessary to go down stream three or four miles, pass outside mud flats (grounded several times at about 18 inches, over a mile from land). Met much floating ice in bay. Started at 7.00 p.m. with light northeast wind, changing to east about 9.00 p.m. A fairly large island about 1 1/2 miles north of Igaloqpuq, mouth of river. About 9.30 struck a deep channel between barely exposed mud flats 200-300 yards apart and soon got between well-defined banks of Niralik branch of Colville. Banks gradually get higher until at village, on west bank about three miles from sea, the bank is from 12-15 feet high. Many fish nets set in shallow water below village, which we reached about 11.30 p.m. The people had not been here very long, coming down from Itkillickpa and up river to fish here, and wait for the Point Barrow (or Cape Smythe) Eskimo traders, who are expected here at the annual rendezvous within two or three weeks.

July 2nd, 1909 (Friday).

Weather:

M.T. + 45 + 53° at 5.30 p.m. Wind northeast + 48° at 9 p.m. Wind northeast. Sunshine all day.

Travel:

Took two pictures of village of Niralik from land side. #9 From northeast 11 1/100 B.S. 2.00 p.m. #10. from southeast 11 1/50 B.S. 2.PM.

Village consists of tents, people with nine umiaks. The chief man, wealthiest and most influential seems to be Panniyulak. We were in his tent several times to eat fish. Everyone here is living on fish "straight" at present. Some of the people are at Oliktok hunting seal, but the people here are out of grease, oil or blubber. No tea among them, about the only thing they seemed to feel the lack of (except oil).

Few deer had been killed this spring, and everyone was

nest about three feet from end of log. I tried to break off part of end of log to get at the nest, and the female bird slipped off and retreated a little way behind the nest, revealing four or five open-roosting young birds.

Black Hawk:

Large flock of Black Hawks flew over in morning. Eight seen at all day until about 8.00 p.m.

Travel:

The large Native village of Kikilik is plainly visible about two or three miles across the land to eastward on another branch of river, about two or three hours walk, but to reach by boat it was necessary to go down stream three or four miles, pass outside and inside (grounded) several times at about 15 fathoms, over a mile from land. Met much floating log in bay. Started at 7.00 p.m. with light northeast wind, intending to reach about 8.00 p.m. A fairly large island about 1 1/2 miles north of Kikilik, mouth of river. About 8.30 struck a large channel between partly exposed mud flats 200-300 yards apart and soon got between well-defined banks of Kikilik branch of Kikilik. Banks gradually got higher until at village, on west bank about three miles from head the bank is from 12-15 feet high. Many fish traps set in shallow water below village which we reached about 11.00 p.m. The people had not been here very long, coming down from Kikilik and up river to this river, and wait for the Great Barrow (or Cape Smyth) Native fishers, who are expected here at the annual Kikilik festival within two or three weeks.

July 2nd, 1909 (Friday).

Weather:

S.T. + 45 + 55° at 8.30 p.m. Wind northeast + 48° at 9 p.m. Wind northeast. Breeze all day.

Travel:

Took two visitors to village of Kikilik from land side. 1/2 from northeast at 1.00 P.M. 2.00 p.m. 1/2 from southeast at 1.30 P.M. 2.15 P.M. Village consists of 100 or 150 people with nine umiaks. The chief man, who is old and somewhat infirm, seems to be Kikilik. He was in his tent several times to see them. Everyone here is living on "kavirag" at present. Some of the people are at Kikilik hunting seal, but the people here are out of grass, all or almost. So far among them, about the only thing they seemed to lack the lack of "kavirag" all.

Two deer had been killed this spring, and everyone was

more hungry for deer meat blubber than for flour, etc. People well supplied with cloth garments (shirts, trousers, etc.), and plenty of guns and ammunition of all kinds. Assisted Stefansson in taking head measurements of 35 people (the whole village, with exception of two old people and children).

Several families here had hunted Sheep and caribou last winter far to the southward; said they crossed the divide to country where rivers flow south, and they went so far that they reached a level country where no mountains could be seen. Aksiatak saw two miners who told them that miners houses are now numerous everywhere south of the divide.

Mountain Sheep and Caribou:

Aksiatak killed twenty Mountain Sheep, a few caribou and three "tents" killed seven moose; moose tracks everywhere. One party ascended to the head of

Travel:

One party ascended to the head of Itkillick river (first large tributary of Colville on east side; head of river said to be only a short days journey from head of Sharavanaktok "trees" (spruce ?) on upper Itkallick, but no trees (except willows) on Sharavanaktok. They said they saw Puteleraguk on Sharavanaktok.

Musk-ox:

Panniyulak told us that there is a musk-ox skull in a good state of preservation near west side of Kupuk branch of Colville delta, about five miles below mouth of Itkilluk river (Itkillick-pa). None of the men here (oldest over 60 years) have ever seen a living musk-ox, although all had seen skulls and bones at various places on the level country; but none in the mountains.

White Fox:

Panniyulak and sons caught 25 White foxes at Itkillick-pa the past winter.

Silver Fox:

Aksiatak had a fine silver gray Fox caught two years ago (or more).

Travel:

Fishing is rather slack just now, but most of the people have fish drying on racks. An old man (Attoarak) traded us some dried fish for caribou meat. He has been sick for some time and was hungry for meat. His wife said he never cared for bread of flour. Some of the people told V&S. that they did not have to eat flour

until spring. Most of them trade for flour with the Cape Smythe people but prefer to eat meat and fish when they can get the latter.

July 3rd, 1909 (Saturday).

Weather:

M.T. +48 +58 at 11.00 p.m. Sunshine; wind south-west. Temperature of river water (in swift current one foot below surface) 56°F.

Ethnological:

V.S. finished measuring heads today. Took several pictures:

- (1) Ikakshak and his daughter Aiaki (front) 11 1/50 8.00 p.m.
- (2) do (profile) 11 1/50 B.S. 8.00 p.m.
- (3) People of Niralik in group 8 1/50 B.S. 9.00 p.m.
- (4) " " " (men) " "
- (5) " " " (women) " "
- (7) " " " (children) " "
- (6) Panniyukak and family 8 1/2 B.S. 10 p.m.
- (8) Tent of Attakotak, showing Kayak, fish-drying rock, and one of the short sleds commonly used in this community.

Trading:

We did quite a little trading this evening. Most of the people wanted some tea, and we traded for 100 rounds W.30-30; 10 boxes 38-55; boxes 45-70 and a few pounds of shot, boat sail, paddle, rudder, copper-pail (or tub) and a few fish. Nearly every man had plenty of surplus ammunition for both rifle and shot-gun. We also traded a little tobacco and a few cans of maked milk.

Mosquitoes:

Mosquitoes very bad when wind is not blowing hard.

July 4th 1909 (Sunday).

Weather:

+ 47° at 12 M.

Travel:

Nine people in two umiaks arrived from Oliktok shortly after midnight, among them Akpik's brother and Panniyukak's mother (the latter much younger looking than to be expected. P. himself is 45-50 years old). The old lady is becoming blind.

Caribou.

Oliktok people said the party had killed one caribou and put up seven pokes of seal-oil.

Travel:

The remainder of the people had left Oliktok at the same time going up river to Itkillickpa, intending to come down by the Niralik branch. The present party had come outside the delta flats. They said the ice was still up against the shore at Oliktok (Beecney Point) when they left. Started up river from Niralik at 3.15 a.m. with a light northwest wind, which shifted to east about 5.00 a.m. and we sailed slowly up stream, and landed for lunch about 6.00 a.m. on west bank.

Little Brown Crane:

Saw Little Brown Crane (*Grus canadensis*) stalking about on tundra near lake about 1/2 mile away, and V.S. and I went after it. The bird walked slowly away, keeping well out of rifle range. Its mate did not appear, but the unwillingness of the bird to leave seemed to indicate a nest.

Deep lake filled with ice except around shore.

Red-throated Loon:

A Red-throated Loon (#288 ♂ *G.lumme*), swam out from shore of a little pond with grass-grown edges. V.S. shot him in the water and after little searching found the nest, two slightly incubated eggs. Nest on wet, boggy ground at brink of pond, a wet mass of dead grass and moss about one foot across, arranged in a circular form with a slight depression in center; partially concealed by scattered grass stems, Set 55/2.

Travel:

Wind remained northeast until 8.00 p.m. when a sudden squall blew up river from northwest, giving us some trouble in gaining shelter at mouth of a little creek on west side, where we made camp. Course - came two miles southeast from Niralik then two miles south from this point. Cloudy all day.

Spectacled Eider:

Dogs flushed a female Eider (Spectacled ?) from nest containing eight fresh eggs, on ground in little patch of scrub willows about one foot high, about ten yards from river bank. Bird came back later, but not within gun range.

Willow Ptarmigan:

V.S. shot a male Willow Ptarmigan entire back, with middle coverts. Quills, greater and lesser coverts white; belly white, sides of breast and flanks partly brown.

Pectoral Sandpiper:

While chasing Eider Duck flushed a female

Pectoral Sandpiper which fluttered along ground, but I could not find nest.

Lapland Longspur:

Flushed a female Lapland Longspur from nest near river bank; five eggs, one of them just hatching out.

Semipalmated Sandpiper:

Flushed a Semipalmated Sandpiper several times on a little dry ridge about 100 yards from tent. She would run a little way, and stop "peeping" faintly and if followed would run further away. I watched her for a long time with glasses, but she would not return to the nest as long as I was in sight.

Alaskan Yellow Wagtail:

Flushed a female Warbler, (Alaska Yellow Wagtail) the first warbler I have seen in Alaska, from a little dry ridge near river. The land on top of bank (about 10-12 feet) above river level is traversed by a network of little ridges from six inches to two feet high, sparsely covered with weeds and low ground willows. Land mostly dry near river, but occasional wet spots between ridges. The female warbler was soon joined by her mate, and they flitted nervously about, occasionally alighting for a few seconds. One would sometimes approach quite near me while flying slowly against wind in a sea-saw course advancing very slowly. I could not approach within gunshot while birds were in ground. I concealed myself at about 150 yards distance and watched birds with glasses. Finally I saw the female disappear behind a little hummock. Going over, the bird flew up when I was about 30 yards away and some searching revealed the nest with five young birds, very recently hatched. Nest placed under the side of a heavy tussock of turf, completely covered by turf, and well concealed by long grasses on top of tussock and around its sides. Nest neatly cupped and composed of grasses, lined with fine grass and feathers. Shot both parent birds:

#289 ♂ Alaskan Yellow Wagtail, Budytes flavus

alascensis

#290 ♀

"

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Coloration of both sexes much alike, the male having brighter yellow on throat, breast and belly, and wings and tail nearly black, the female fuscous. Back of both birds olive; white superciliary line, outer tail feathers white.

July 5th, 1909 (Monday).

Weather:

M.T. + 32° + 37 at 12.30 a.m. + 46° at 7.30 a.m.
Wind changed to southwest before midnight and sun came out clear. Wind south at 2.00 a.m. Northeast at 8.00 a.m.

Fish:

Caught four small fish in net at mouth of creek, one Alaska Grayling "Su-luk-po-iok", Thymallus signiter; one Whitefish "Tubik" and two Long-nosed Suckers (Miloiak = the milker or sucker - Nunatanu name; Kanrl'lik name at Port Clarence), said by Billy not to be found in sea, but occasionally in rivers at Teller. Preserved skin of one Sucker Catostomus catostomus (Forster) in milk can of alcohol, (have no jar suitable for a whole fish).

Mosquitoes:

Mosquitoes hovered in a cloud around us while we loaded the boat. Took two kodak exposures, with portrait lens at 2'8" showing Billy's back, with white artiga nearly black with mosquitoes, he having stood still for two or three minutes to allow them to settle.

#9 Mosquitoes 11 1 100 B.S. 8.00 a.m.
"10 " 8 1 100 " "

Travel:

Started up stream again at 9.30 a.m. , and traveled until 10.30 p.m. making camp about one mile below the mouth of Itkillick river (Itkillickpa). The river pursues a very winding course for 15-20 miles, the banks gradually becoming steeper and higher (some cut banks. 12-18 feet high, mostly fine clayey sand. A little gravel appears on bars a few miles below Itkillickpa. The winding channel prevented our sailing more than half the time, and we alternated by "tracking" the boat, sometimes ourselves and sometimes by dogs, or paddling where banks were unsuitable for tracking.

Duck Hawk:

Saw one Duck Hawk (Falco peregrinus anatum) sitting on top of high cut bank of river.

Tree Sparrows:

Landed on east bank at a spot where a number of patch of willows 3-4 feet high grew among some sand dunes. Here I saw three or four Tree Sparrows (Spizella monticola) and

many Longspurs.

Semipalmated Sandpipers:

Semipalmated Sandpipers were common everywhere along the river, more often on top of dirt banks than on sand beach, flying about over the water singly, or in pairs or groups of three or four, their rapid flight often reminding me of Bank Swallows.

Travel:

Landed to cook lunch about 10 miles below Itkillick-pa, and I crossed the tundra to bank of a large lake, still nearly filled with ice.

No Ducks seen here.

Old Squaw:

Nothing but a few Old-Squaws seen today. The ducks seem to be all on or near the coast.

Spermophile:

Caught a young Marmot (C. parryi) in some small willows. He became very tame almost at once, climbed up inside my sleeve and into my pocket. Finally he escaped into the bottom of boat under cargo and got away in the night. He was about the size of a common Chipmunk.

Pacific Godwit:

Shot a ♂ Limosa lapponica baueri Naumann, #292 in a wide marshy flat near lake. The bird was alone, and kept uttering a loud clear whistle resembling Curlew's note.

Willow Ptarmigan:

Shot one male Willow Ptarmigan #293, back entirely brown.

Arctic Tern:

A few Arctic Terns were seen hovering over lake,

Parasitic Jaeger:

A few Parasitic Jaegers seen.

Alaskan Yellow Wagtail:

One pair of Alaskan Yellow Wagtails (B.f.alascensis) seen in bushes along river; very wild.

Travel:

We had some difficulty in finding true channel at point of a long low sandy island. The current was sluggish here and at upper end of island it was hard to see in which direction the water was running, as the wind

raised waves pretty high. After leaving island, the channel was wider, ca 300 or 400 yards and shallower. We grounded often 100 yards from shore and seldom found channel more than 4-5 feet deep, although sometimes there were holes 6-8 feet deep.

Semipalmated Plover:

Pair of Semipalmated Plovers (*E. Semipalmata*) seen on sand bar; very noisy.

Travel:

A party of twelve Eskimos, three tents with one umiak, were camped near the winter fishery on east bank of river just above the fork of the two great branches of the Colville delta, about one mile north below mouth of Itkillick (Itvelik R.) the first large tributary of Colville on east side. This is considered the head of the delta, although the small, deep river which we entered west of Niralik flows out of the main stream several miles above Itkillickpa. So the whole of the Colville river never comes altogether as one stream, the real delta beginning before the large volume of water from the Itkillick river enters the main stream. The mouths of all the branches are flanked by exposed and unexposed mudflats and bars and the channel proper is very difficult to find and keep although there is said to be a good deep channel running well out to sea from both the Niralik and Kupik branches Kirrvirk, the head man of this party, said that they left Oliktok (Beechey Point) four days ago, and that at that time the ice was solidly against the beach there and that they came west by sleds a little west of our cache, about five miles west of Okiktok.

Polar Bear:

They killed one Polar Bear out on the ice near Oliktok last month and had some meat left. We had a meal of it in Kirrvirk's tent, fairly good meat, although a trifle "high".

Travel:

Kirrvirk had the only large tent in the party, 10 x 12 wall tent, and in it I saw eight guns (six rifles and two deerskins. They had come up here only to dig a cache for their winter's supply of seal blubber, and

expect to go to Niralik within a day or two. They had a very large umiak, nine ugruk skins.

July 6th, 1909 (Tuesday). Head of Colville River delta,
Weather:

Warm sunshine all day. Wind northeast.

Temperature of air at 5.00 p.m. 62°; River water
(one foot below surface) + 57°.

Willow Ptarmigan:

Hear Ptarmigan calling about 1.00 a.m. and Stefansson went after them, killing a male and female. He flushed the female from a nest in tall grass on border of a very dense, tangled thicket of willows, eight eggs, incubation far advanced. Set 59/8. Skinned female bird. #294 female Lagopus lagopus. Nest composed of dead willow leaves, grasses and a few breast feathers from female Ptarmigan. When shot, the female Ptarmigan fell about a foot from a small bird's nest which V.S. could not identify. I went to the spot soon after, but saw a pair of Tree Sparrows, and a pair of Western Savanna Sparrows.

Near the nest but could not tell to which birds the nest belonged. The nest contained five young birds three or four days old, with partly fledged dusky feathers (almost black). Nest on dry ground in a dense clump of grasses on a little ridge near willow thicket, well concealed, composed of coarse grasses and lined with fine, pale-colored hair-like grasses.

Tree Sparrows:

Returned to the nest in the afternoon and saw a pair of Tree Sparrows hopping nervously about and chipping. One of the birds had an insect in its mouth, and watching closely, I saw it descend to the nest. Approaching, I flushed the bird at about six feet distance.

Travel:

Paddled the umiak up to mouth of the Itkillick river to the "Miner's house", built 4-5 years ago by Mr. Graver, et al, the most northern miner's house in Alaska. Stefansson had cached some stuff in the house last winter, and found it in good condition. Panniyuluk told us that the river had flowed into the house last spring, but he had placed our goods high and dry. Some water and ice still on floor of house. Ground sandy and rolling here, many scrub willows; high hills or pinoks to southward. Colville over 1/2 mile wide from Itkillickpa to

fork of Niralik branch and very deep.

Redpoll:

Saw a flock of six or seven Redpolls, Acanthis linaria in weeds near house. They alighted on roof and I fired at the bunch, killing one female Redpoll and a stray female Lapland Longspur among them.

W. Savanna Sparrows:

Several W. Savanna Sparrows were hopping about on the ground and in the willows, and I finally shot one after much difficulty in approaching. Dogs got away with 3 specimens (above) before embarking.

Semipalmated Sandpiper:

Flushed a Semipalmated Sandpiper from a dry piece of ground between two ponds. Looking closely at the spot I found four downy young birds, just hatched, lying flat on ground, perfectly motionless, with heads stretched out on ground. When I picked one up and set him down again, he ran a little way and crouched again, being almost invisible among the lichens and half-dead grass. Took all four for specimens Nos. 296, 7, 8, 9. Semipalmated Sandpipers juvenile, sex indeterminate. The old bird attempted to draw my attention by "peeping" and fluttering along the ground.

Alaskan Yellow Wagtail:

A pair of Alaskan Yellow Wagtails were evidently nesting on the point at junction of the two rivers. They kept flying about all the time I was there, often going 100 feet up and then alighting for a moment, but keeping well out of gun range. Finally killed female #295 Alaskan Yellow Wagtail. Saw two more pairs of the same species in the dense willow scrub along the top of high cut bank at our camp.

Travel:

The willows here form a dense tangle, very difficult to walk through. The trunks grow from one to two inches thick; branches very gnarled and spreading, interlacing with their neighbors, the tops never growing more than two or three feet above the ground. These patches are said to be almost impossible to traverse with or without snowshoes in winter, although they form great feeding grounds for Ptarmigan. Took one picture of Miner's house at Itkillickpi #1, 11 1/100 B.S. 4 p.m. and one of Eskimo camp from river #2, 8 1/100 B.S. 5 p.m.

Red Phalarope:

A few Red Phalaropes seen at Itkillickpa and several near camp.

Old Squaw:

Shot two female Old Squaws from flock of three in a little pond near camp.

Northern Phalarope:

Saw one Northern Phalarope.

Parasitic Jaeger.

Saw a pair of Parasitic Jaegers.

Fish:

Set fish net last night but caught nothing. About half a mile below fork of river is a great fishing place in fall and winter, and most of the Colville people spend a great part of their time there. Those who fish assiduously catch enough to live on, while those who follow the caribou often starve.

Mosquitoes:

Mosquitoes very numerous here and it is almost impossible to walk through the willow thickets except facing the wind. When the wind is not blowing the mosquitoes are almost unendurable.

July 7th, 1909 (Wednesday).

Weather:

M.T. 48° + 62° at 8 a.m. 81° (in sun) at 9 a.m. 89 at 10 a.m. 92 1/2 at 11 a.m. 91° at 12 m. No wind before 11.30 a.m. Clear, bright sunshine; hottest day of summer. North east wind after 1.00 p.m. and a little cooler.

Western Tree Sparrow:

Shot male Tree Sparrow #301.

Travel:

Started down river at 8. a.m. following the main river (called Kupik), which runs northeast toward Oliktok. Several long, sandy islands in channel. Made one sounding in mid stream, 3 1/2 fathoms, and one 2 or 3 miles further, down 2 fathoms.

Caribou:

Landed on a large island to look for lost dogs, and saw fresh (last month ?) caribou tracks. St

Snowy Owl:

Shot at a Snowy Owl and sandbar, but missed.

Willow Ptarmigan:

Saw one male Willow Ptarmigan, flushed by dogs on mainland.

Spectacled Eider:

Dogs also flushed female Spectacled Eider from brush, and from the wrangling which ensued, I think they found a nest with eggs. Shot five female Spectacled Eiders while drifting down stream, and saw a few gulls.

Alaska Yellow Wagtail:

Saw one pair of Alaska Yellow Wagtails on a high bluff where we landed to take sights, about five miles from coast (first sight of ice mirage). Another pair were seen three or four miles further up stream. These Wagtails were nowhere numerous, but probably at least one or two pairs were nesting every half mile or so along the river bank, near the willows. A short distance from the river, where the tundra is bare, they have not been seen.

Travel:

Had to land and make camp at 5.00 p.m. on east bank on account of rising northeast wind, which meeting the river current, raised a choppy swell, with white caps, dangerous for our heavily loaded boat.

Longspur:

Longspurs seen everywhere along the river.

Mosquitoes:

Mosquitoes very bad, and biting viciously. There seem to be at least two species, one large species with a red head, and a smaller species. As we have no mosquito nets here, we have to keep our artiga hoods up all the time, in spite of the hot weather.

Old Squaw:

Old Squaws numerous in ponds near camp.

Willow Ptarmigan:

Billy killed three female Willow Ptarmigan after firing about twenty shots with 22 rifle.

July 8, 1909 (Thursday).

Weather:

M.T. + 38°. Sunshine high, south wind at 4.00 a.m., but before we were ready to sail it changed to northeast at 6.00 a.m. + 75° at 1.00 p.m. Cloudy after 8.00 p.m.

Old Squaw:

V.S. shot two Old Squaws in water at edge of a large ice covered lake. He also saw a pair of Black bellied Plovers which appeared to be nesting and marked the spot; also a Red Phalarope's nest with four eggs. I went out to look for the Plover's nest, but the Plover flew up crying Tülik before I was within 200 yards of the nest. I searched in vain for the nest although the Plover kept running about and calling about 100 yards away. V. S. and Billy soon came along and helped me hunt for a little while. They were going to look for deer but were soon stopped by another river channel and came back. A small bunch of Willow Ptarmigan were flushed near together and Billy killed two males and one female. I also shot a female Old Squaw. When V.S. came back again he watched the Plover's haunt through the glasses while I walked ahead. The Plover soon flew up and I marked the spot, but diligent search by both of us failed to disclose the nest. I came back again half an hour later, saw the Plover and after a little running about, he disappeared behind the same little ridge as before. I walked around to a point about 100 yards to the other side and lay down perfectly motionless. By this time the Plover was becoming used to my manoeuvres, and within five minutes ran directly to the nest and sat down. I watched him through the glasses for some time, but when I stood up and walked a few paces forward he was up and away again. This time I found the eggs at once, in plain view, on ground that we had looked over several times. Nest on low dry ridge between two small ponds; ridge about fifteen yards across and three or four feet above water level. Nest composed of simply a few shreds and stems of a white moss or lichen which is found abundantly on dry ground everywhere here; these fibres lining a little hollow about four inches across and one inch deep in a green moss and lichen covered hummock. Four eggs about one-fourth incubated, set 56/4. Returned to camp for my camera and lying down about twenty feet from the nest, the bird came running straight towards me until within 20 yards when I shot him. #302 male Charadrius squatorola.

The female bird did not appear while I was there, although V.S. saw a pair of the birds the first time he passed by.

Photo #3, B-b. Plover N/4 16 1/5 hazy sun 7.30 p.m.
 " 4, " " 15 1/50 " " "

Red Phalarope:

#5 & #6. Red Phalarope N/4 11 1/25 hazy sun, 7.30 p.m.

Old Sparrow:

V. 3. shot two Old Sparrows in water at edge of
 a large low covered lake. He also saw a pair of
 Black-bellied Plover which appeared to be nesting
 and about 100 yards; also a Red-throated Loon
 with four eggs. I went out to look for the Plover's
 nest, but the Plover flew up before I reached it.
 was within 200 yards of the nest. I searched in
 vain for the nest although the Plover kept running
 about and calling about 100 yards away. V. 3. and
 Billy went down and helped me look for a little
 while. They were going to look for their first nest
 stopped by another pair of Black-bellied Plover. A
 small bunch of Willow Ptarmigan were flushed near
 together and Billy killed two males and one female.
 I also shot a female Old Sparrow. When V. 3. came back
 again he walked the Plover's nest. The Plover was then
 alone while I walked about. The Plover seemed by
 eye and I walked the nest, but did not seem to
 both of us failed to find the nest. I came
 back again and we were later, saw a Red-throated Loon
 after a little running about. He disappeared behind
 the same little ridge as before. I walked around to
 a point about 100 yards to the other side and
 saw perfectly motionless. By this time the Plover
 was becoming used to my presence, and while it
 minutes ran directly to him and sat down. I
 walked his nest. The Plover for some time, but
 when I stood up and moved a few yards, it started
 and ran away again. This time I found the eggs
 at once, in plain view, on ground that we had looked
 over several times. Went up for my light between
 two small ponds; right about 100 yards from
 and there on our left above water level. First
 composed of slightly a few barrels and stones at a side
 case or fishes and on the land immediately no day
 ground, apparently bare; these things being a little
 below about four inches across and one inch deep.
 in a grassy area and looked covered with moss. Four
 eggs were the result. Incubated, but 20/1. Returned
 to camp for my camera and light and shot again
 feet from the nest, the bird came running straight
 towards me until within 10 yards when I shot him.

1935 male Black-bellied Plover.

The female bird did not appear while I was there.

although V. 3. saw a pair of the birds the first

time he passed by.

March 25. 2-2. Plover 2/4 is in the nest with 2-25 1/2.

March 26. 2-2. Plover 2/4 is in the nest with 2-25 1/2.

Photographed the Red Phalaropes nest found by V.S., and collected nest and eggs, Set 58/4, incubation begun.

Black-bellied Plover:

The Plover occasionally uttered a single short whistled note, but the usual cry was Jou-lik the first syllable prolonged, the last short. Nest on fairly dry mossy ridge between ponds, about 50 yards from Plover's nest; about three inches across, one inch deep; composed of a mass of fine dry grass and moss lining a little hollow in the ground in the midst of a clump of grass; well concealed. Saw male bird on nest on two occasions.

Red Phalarope:

Found another nest of Red Phalarope about 100 yards from this one, on other side of Plover's nest, on low, boggy tundra, near pond; composed of a few fine grasses and a few feathers lining a little hollow in the ground about three inches across, one inch deep. Four eggs, slightly incubated, Set 57/4. Saw male bird on nest. The male Phalarope seems to perform all the duties of incubation. I have never flushed a female Phalarope from eggs, although the female often appears on the scene after the male leaves the nest, flying about with the male, uttering a low crooning note.

Longspur:

Shot a young Longspur, well-fledged, able to fly a short distance; tail short; #303, C. lapponicus Sex (?) juv.

Parasitic Jaeger:

Saw a pair of Parasitic Jaegers around a little group of connected ponds. They often alighted and flew screaming over my head, but I saw no signs of a nest.

Arctic Terns:

Six or eight Arctic Terns hovered continually over a small lake, often alighting on one or two little islands in the middle.

Gulls occasionally flew over, one pair Loons seen, and several Pectoral and Semipalmated Sandpipers.

July 9th, 1909, (Friday).

Weather:

MT. + 43, 70° at 9.30 a.m. wind east, + 57 at

9.00 p.m. Hot, sunshiny day.

Spectacled Eider:

Three female Spectacled Eiders shot in river near camp.

A few Parasitic Jaegers, Gulls, Arctic Terns and Lapland Longspurs seen.

Travel:

Strong northeast wind and white caps on river all day, Wind died down after 8.00 p.m. and we sailed at 11.30 p.m. Spent most of day cleaning guns and repairing gear.

July 10th, 1909 (Saturday).

Weather:

M.T. + 34 (?) + 51 at 1.00 p.m. Light northeast wind in morning.

Travel:

Traveled until 11.00 a.m., ice in sight outside of river mouth. River splits up into numerous small channels, with small islands between so that it is difficult to choose a course to follow. Whichever one we enter, we soon wish we had tried another one. Landed about 5.00 a.m. to cook lunch and crossed tundra to a hill about 1/2 mile away. Very little to be seen.

Red Phalarope:

Flushed a Red Phalarope from nest on low, boggy ground. Four eggs, about one-half incubated, Set 60/4.

Parasitic Jaeger:

Saw several Parasitic Jaegers, a few Old Squaws, many Lapland Longspurs, 8 - 10 Eiders.

Travel:

Took picture of group cooking in midst of mosquito smudge #7, 6.8. 1/75, B.S. 5.30 a.m. A little further down, we entered a channel about 200 yards wide, but which proved to be nowhere more than 2 1/2 feet deep. We finally got the boat within 30 yards of shore, portaged half a load ashore through water and soft mud, and made camp on an island, top about six feet above river level. Island dry and sandy with considerable drift willow along banks.

A few Eiders, Old Squaws, Gulls, Black-

9:00 P.M. and morning 24.

Three female Spectacled Eiders shot in river near camp.

A few female Lesser Grebes, White Grebes, and several Long-tailed Grebes.

Travel:

Along river bank with white sand on river all day. First shot taken at 8:30 P.M. and we called at 11:30 P.M. spent most of day cleaning gun and repairing camp.

July 10th, 1909 (Saturday).

Weather:

W. V. - 50 (1) - 57 at 1:30 P.M. light northeast wind in evening.

Travel:

Travelled about 11:30 A.M. for in light rain. River split up into number of small channels with small islands between so that it is difficult to make a course to follow. However due to rain we were able to find another way. Reached about 8:00 A.M. to cook lunch and passed through a willow 1/2 mile away. Very little to be seen.

Red Island:

Found a Red Island about 200 yds. out in bay. Found eggs, about one-half incubated. Set 50/4.

Travel & Landing:

Our way of landing was very rough, as the sea was very rough. 8 - 10 Eiders.

Travel:

First attempt at landing was in water of some 100 yds. W. of 1/2 N. 1/2 E. 1/2 S. A little further down we entered a channel about 200 yards wide, but water grew to be worse more than 1/2 E. 1/2 S. We finally got the boat within 20 yards of shore, but could not land. We were then forced to go back and land on an island, but about 1/2 E. 1/2 S. level. Island is very sandy with some willow along beach.

A few Blunt-bills, White Grebes, and

throated Loons, and one Yellow-billed Loon flew over.

Terns:

A large colony of Terns were hovering over a little island about 1/4 mile east of us, but we could not get across.

American White-fronted Goose:

Billy started exploring and soon found a nest of American White-fronted Geese (Anser albifrons gambeli), about 300 yards from camp, containing four young birds, apparently just hatched, as they could barely stand up and waddle a little way. Nest on a little mound of dry earth (Marmot burrow) a foot or two higher than the surrounding land, and about 40 yards from the river. Both parent birds were stalking around keeping about 200 yards away. The nest contained a mass of fresh egg-shells, with the lining membrane not yet dry. Nest composed of a mass of gray down, mixed with bits of grass, stems lining a little hollow in the ground. I went back to camp for rifle and tried to stalk the geese, but did not get very near, although they came within 100 yards of V.S. and Billy, who were lying near the nest with shot-guns. My approach scared up the geese and they flew over Billy, who fired and missed, and the geese flew away. I took two pictures of the young geese, in and near the nest.

#8, juv. W.t. geese N 4 11 1/100 B.S. 2.p.m.

#9, " " " N 4 11 1/100 " "

portrait lens.

The young geese were colored olive greenish on back and crown, under parts and neck bright greenish yellow; feet dull brown, iris hazel, bill dusky. They refused to pick up food, although they would eat mosquitoes offered to them..

Semipalmated Sandpiper:

Flushed a Semipalmated Sandpiper near Goose's nest, but did not stop to look for nest. V.S. and Billy found it later. Four eggs on almost bare dry ground, about 25 yards from river. As the eggs appeared to be nearly ready to hatch, I left them.

Ruddy Turnstone:

A pair of Turnstones were very noisy while I was on one side of the island, but I could find neither eggs nor young birds. The Turnstone, four of them later, attacked and drove away a Parasitic Jaeger which flew over the island. (Noted them do this before June 27th).

Travel:

Went to sleep at 3.00 p.m. having been up 31 hrs., Slept 14 hours. A single Dandelion blossom on top of bank.

July 11th, 1909 (Sunday).

Weather:

+ 40 at 6.30 a.m. + 39 at 7.30 p.m. + 52 at 7.00 a.m. Strong northwest wind. Sun visible through clouds in forenoon. Cloudy afternoon.

White-fronted Goose:

Young geese much stronger today, running about in tent, catching flies and mosquitoes. Refused to pick up food from ground, but eat triscuit crumbs from each other's backs with great avidity.

Travel:

Started with boat at 9.30 a.m., intending to cross to another higher island on west side about a mile further out, but could not get boat within 200 yards of shore. Waded ashore, and saw many Marmot holes, one marmot and a few Longspurs. Island proper about 200 yards wide with 500-600 yards mud flat on west side. Several large islands seen to westward and many mud flats. It appears that we have struck a channel further east than the best channel (the proper route from Oliktok is to follow the coast 6 or 7 miles south-west, then strike out across the bay to westward, outside the mudflats, heading for the first high island 5-6 miles from mainland [probably Thetis island or Lettingwell] which has a deep channel (on east side at least) which leads directly into the big river). We tried to go ahead, but water seemed to get more shoal as we proceeded. We explored on all sides wading half knee-deep for hundreds of yards in all directions. We finally found a slightly deeper narrow channel running between two barely exposed mud flats near an island on east side of river. Here we landed at 12 m., had lunch, unloaded and cached half our cargo, and started ahead with half a load, after wading ahead for about a quarter of a mile. Light rain falling 3.00 p.m. By dragging boat across a wide bar at north end of island we got into water of another branch of the river which comes down east of the one we were on. We soon found a six foot deep channel 25 feet wide with fairly strong current. Followed channel northeastward to mainland, where we found 3-4 feet of water very near shore. Landed in a little bay, unloaded boat and made camp. Stefansson went inland to look for caribou, while the rest of us went back for

therest of the load.

Old Squaw:

Saw very few birds today, a few Old-Squaws.

Eider:

Saw two or three Eiders.

Snowflake:

Saw one male Snowflake.

Ruddy Turnstone:

Saw four Ruddy Turnstones.

Fish:

Four Whitefish and two Sculpins in our net this morning.

Spectacled Eider:

Billy shot two Spectacled Eiders.

July 12th, 1909 (Monday). Oliktok Point (Leffingwell) Alaska.

Weather:

M.T. + 37° + 39° at 7.30 a.m. Cloudy, light northeast wind.

Caribou:

Stefansson returned to camp at 5.00 a.m. having seen four caribou a few miles to the eastward, followed them several hours and killed all four shortly after midnight. He said the night was cold enough to keep down the mosquitoes and clear enough to see well. The carcasses were lying about 3/4 of a mile from a little creek which flows into the bay about three miles east of our camp.

Travel:

We started out at 8.00 a.m. with empty umiak, tracking along coast with dogs, paddled into a long shallow bay at mouth of creek, (near Thetis mound, Leffingwell's paper 109, pl. IV) and tracked up stream by dog and man power for three or four miles. Stream averages 50 yards wide for first two miles and from 3-8 feet deep; above this it narrows rapidly and about four miles from the coast the water averages less than 10 feet across. In a few places the stream ran over gravel bars with less than four inches of water. Skinned and cut up deer, and packed it across about 3/4 mile of fairly dry rolling hills to the river valley (six pack-dogs and four people). Fed the dogs all the intestines, livers, lungs, etc., and some meat

nearly as much as they wanted.

Caribou:

Two of the caribou were yearlings, male and female, with horns less than one foot long, two branches on each. The other two were bucks, two years old or over. A large quantity of the winter coat had been shed, giving the animals a patchy appearance. The remainder of the hair was so loose that it dropped off in great handfuls whenever roughly handled. Hair on head (except forehead) mostly shed, as well as on neck. The new hair is very short and soft, black on head, back and sides; neck and shoulders grayish. Hair on flanks and belly almost absent, very short. Skinned the largest male for a specimen. The others were plucked (loose, old hair removed) before skinning. The new hair is nearly long enough for clothing. Pannigablok says that the skins with soft, short, velvety, black hair, plucked before the old hair is shed are especially valued by the Point Barrow people for trimming garments (pieces of black skin are alternated with white reindeer skin).

Measurements of male caribou #309; Length (nose to tip tail) 73 inches; Tail 7. Height at shoulders 42; depth chest 18 1/2; hip to shoulder 39. Girth neck (behind ears) 20. Girth neck (front of shoulders) 26. Girth chest 47. Girth belly 56; girth loins 47; girth hind leg 20, girth fore leg 13.

All the caribou had velvet covered horns very soft and vascular. Billy cut off the tips of one pair of horns, skinned them and ate the soft portion around the horn core. I tried it, but found the horn rather tasteless, although not unpalatable.

Snow Buntings:

Saw many Snowflakes (*P. Nivalis*) in driftwood which is heaped in windrows at entrance to bay and for half a mile up the creek.

Semipalmated Sandpiper:

Two young downy Semipalmated Sandpipers were caught on river bank.

Red-breasted Sandpiper:

Dogs chased a Red-breasted Sandpiper (*Tringa alpina pacifica*) which fluttered along the bank for some distance. She probably had young, and succeeded admirably in drawing the dogs away from them.

Red Phalarope:

A few Red Phalarope seen.

A few Northern Phalaropes, Jaegers, Longspurs, two Black-bellied Plovers seen, and a flock of large gulls (*L. glaucus*?).

Travel:

Water lowered several inches from noon to midnight, exposing several mud flats a little way off shore, and compelling us to do a bit of exploratory wading and boat-dragging before reaching camp with our load.

July 13th, 1909, (Tuesday).

Weather:

M.T. + 35 1 2; + 36 1 2 at 1.00 a.m. + 54° at 12 m. + 54° at 1.00 p.m. northeast wind all day, too high for travel.

Red-throated Loon:

Billy told me that yesterday he had seen a Red-throated Loon "tax-a-rank" sitting on her nest on a little island in a pond near camp, and about 100 yards from coast. He could not reach the nest but thought I could with long boots. We went over, but saw no bird on the island which was about 25 yards from shore. I succeeded in getting to the island, water and mud on bottom about 2 1/2 feet deep. Island a mass of soft peat, about 20 feet x 10 feet and top about eight inches above water level. Nest a damp mass of weeds, mosses and grass, about one foot across, and hollowed out about two inches deep in center, placed about six inches from edge of water. While we were near the nest the male bird circled about us once or twice, and flying over the pond, was dropped with a broken wing. It took several more shots to finish him, as he could swim and dive very well. #310 G. lumme male. Eggs about one-half incubated, Set 61/2.

Longspurs:

July 14th, 1909 (Wednesday). Point Milne (Leffingwell).
Alaska.

Weather:

M. T. + 46°. +48° at 6.00 a.m. West wind. Water rising. Cloudy forenoon.

Travel:

Left camp at 11.30 a.m., reached our cache five miles west of Oliktok, [Milne Point] at 2.30 p.m. [ca. 1490 23 W]. Found cache O.K. Ilavinirk had moved it further inland near Kunalook's cache. My five caribou skins and skulls were in good condition and nothing appeared to be missing. The natives who have been sealing here

seem to have been using John Grubin's Kayak which he lent me, and worn some paint off the bottom and nearly through the canvas in one place. It leaks a little at present. A little creek flows into ocean near cache, and there is a conspicuous "pingok" about half a mile inland, from which Stefansson's party shot several caribou last fall. Ice pack about half a mile off shore at this point and gradually closing in towards Oliktok (Beechey Point), [Point Milne, Leffingwell?]. Beechey Point is the name of the long, narrow sand-spit which extends out into the sea about half a mile from the mainland (the high cut banks) which also sweep out in a long curve towards the north on each side of the point. Fairly deep water, 5 or 6 feet with hard sandy bottom, close to shore for 1/4 mile on each side of point. Point marked by several upright posts with roots upward, about 100 yards back from point. Ice pack close to point at Oliktok about 20 yards leaving a narrow passage, just deep enough for umiak across end of sand-spit. About 50 yards from Point on east side there was only an opening about ten feet wide between edge of ice and shore, and we had barely six inches of spare space in getting through. Strong current to eastward across bar at Point; water brackish, quite salty a little way on east side of Point. Half a mile west of Beechey [Milne] Point the water was perfectly fresh.

Hydroits:

Noticed many fragments short branches of Hydroits (Plumularia?) strewn on beach and floating in tide wash along shore, in perfectly fresh water, all along the beach, as far as the mouth of large creek about 10 miles southwest of Beechey [Milne] Point.

Travel:

Plenty of large driftwood all along sandspit at Point and considerable wood all cut banks at intervals for a long way on either side. Three graves (recent) about half a mile to southeast of Point, one (double) marked by cross at each end; wooden coffins on top of ground. (examined last spring).

Old Squaw:

Saw several large flocks (50-75 birds in one flock) of male Old-Squaws, and two or three small flocks of Eiders (all females), in water and on edge of ice floe. No male Eider Ducks have been seen since June. Pannig-ablok says that at this season, the male Eiders flock in great numbers along the coast at Point Barrow, and

every strong east wind brings more of them along.

Travel:

Sailed as far as Beechey (Milne) Point from cache with northeast wind quartering, then had to paddle on east side of Point, crossing a little bay to mouth of a little creek called Ungaravik, about three miles from Oliktok. Passed two small capes en route; high black earth or peat cut banks, with fairly deep water near shore, although boat could seldom be brought close to bank on account of large sunken blocks of peat on bottom. Ground ice appears very often, about one foot below surface of bank, at a great many points all along coast, from first camp outside of Colville, as far as this creek. Creek flows into a long bay or fjord, about 1 1/4 mile wide and 3/4 mile long. High sandy bank (ca 20 feet high) on west side of mouth. Remains of old Cache (or sunken ice-house), about six feet square, and walled up with timbers. Perhaps left by Capt. McKenna's whaling ship which is said to have wintered near here several years ago. Stefansson had started across country from a point about three miles west of Oliktok, looking for caribou, intending to meet us, on this side. We did not cross bay at mouth of creek, think Stefansson could not cross creek, and made camp at 10.30 p.m., in a little cove about 300 yards west of creek mouth, where beach was low and there was plenty of driftwood. Sunshine until midnight, when a fog blew in from the ice pack. Stefansson came in shortly after midnight, having crossed the creek far up country, where it was small, and again in shallow water at its mouth. He said the country inland from here is covered by a dense maze and network of lakes, ponds, etc., connected by rivers or narrow deep channels. He saw no caribou.

American White-fronted Goose:

Saw many Geese (about 200 in all), mostly American White-fronted). They would not fly but swam out into the lakes when he approached. Several geese were seen with broods of small young ones.

Dogs:

Made a large rack by setting up two tripods of long poles, with cross bar between and hung up several caribou skins and skulls to dry them a little. It is extremely difficult to place or keep anything like this out of reach of our dogs, who have a diabolical cunning way in all the arts of stealing, and seem able to reach anything, even in an anchored boat, unless it is deeply buried or hoisted above their heads. As Ned Arey says, it is a good thing that dogs can't fly.

July 15th, 1909(Thursday). Camp Gwydyr Bay, Arctic Coast.

Weather:

M. T. + 42. + 47 at 2.00 p.m. Bright sunshine most of day. Foggy towards evening. Strong northeast wind all day, which opened a lead at least half a mile wide along shore as far as we could see. Wind too strong to sail.

American Golden Plover:

Went with Stefansson about half a mile inland along creek about half a mile from coast to a spot where he had seen a pair of American Golden Plovers yesterday, and thought there might be a nest. We saw the Plover fly up, for a short distance when we were about 100 yards away, and run off very rapidly, occasionally uttering a note resembling the "Tu-lik" of the Black-bellied Plover, but perhaps a trifle less loud. The Eskimos have the single name, "Tulik" for both species. The bird allowed us to come within 50 yards and sometimes closer (near enough to see the yellow spots on back), when we were near a certain point, but we could not find the nest. I lay down about 200 yards away and watched the bird through glasses. She ran about hither and thither, feeding and suddenly disappeared behind a little hummock. I took note of exact spot, and called to Stefansson who focused glasses on spot while I walked towards the spot. The bird soon flew up and I advanced, marking the apparent spot with a mound of turf. We carefully scrutinized every square yard within 50 feet of the spot, but found nothing, although the bird often sidled up within 10 yards of us, and then fluttered away, crouching on ground with feathers ruffled out. Sometimes she would approach with wings spread out and slightly drooping uttering a plaintive "peent". Sometimes she would wail out a mournful "Tu-lik" note or a sharp "cheep"! "cheep". I went back about 100 yards and lay down. Within two minutes the bird after looking around in all directions, ran directly to the nest, and sat down, and I could see his head and neck very plainly. This time Stefansson lined up the bird with the former landmark, while I advanced from another angle, - it being very difficult to estimate distances looking across a series of little hummocks. The bird flew up almost immediately as we advanced, and we walked directly to the nest, which was in plain sight, unconcealed, about 15 feet from the first mark, on ground which we had carefully searched over before. The nest was near the top of a dry moss and lichen covered hillside sparsely grown with short grass overlooking a little ravine, about half a mile from the coast; a little hollow about four inches across, and one inch deep in a bed of dry, gray moss, composed of a very few bits of grass, leaves and white lichens.

Three eggs, incubation advanced, Set 62/3. The bird approached us as before, this time within 15 feet, too close to shoot, so I chased the bird, which ran away rapidly, and I shot it, finding it to be the male parent. The female Plover did not appear on the scene today. #311 male Charadrius dominicus. This was the first bird of this species which I have seen in Alaska. The Black-bellied Plovers have been seen often, but not in large numbers, single pairs only seen and never nearer than a mile or two from another pair. Both species are very wary, and leave nest before a man gets within 200 yards; the first intimation of the bird's presence being usually a plaintive Tu-lik, and then a sight of the bird running rapidly away. The eggs of the Golden Plover were only a trifle smaller than the Black-bellied Plovers, although the bird is much smaller, and have no greenish tinge. Ground color light grayish brown or clay color, thickly spotted with burnt umber and black. The color harmonized so well with the variegated colors of the earth-gray moss, white lichens, brown moss, green moss, green grass and dead grass, - that they were very difficult to see.

Red Phalarope:

Flushed a male Red Phalarope from boggy tundra. He fluttered along the ground with ruffled feathers, and then circled around our heads, uttering plaintive notes. We could not find the nest. V. Stefansson said that he found a Red phalarope's nest yesterday containing three eggs and one young bird.

Longspur:

Caught a young Lapland Longspur which was able to fly only a yard or two at a time, but could run very fast and dodge quickly, and I had some difficulty catching it in the grass.

#312 C. lapponicus male (?) juv. Tail feathers about 1/3 grown, shorter than specimen shot July 8th.

Travel:

Our camp is located near the bottom of the so-called Gwydyr Bay, marked on charts as a deep long bay between Beechey Point and a long point about — miles east of it. The bay is really a very shallow indentation of the coast, broken by several points projecting nearly (within a mile) of line joining extremities of bay. Water shallow (not more than 4 or 5 feet within 1/4 mile of shore). Took photo of camp, drying rack, umiak, etc. 16 1/50 B.S. 4.00 p.m.

July 16th, 1909 (Friday).

Weather:

M.T. + 40° + 42° at 2.00 p.m. Light southwest wind for a little while at 6.00 a.m. Northeast wind from 7.00 a.m. to 9.00 p.m. Calm from 9.00 p.m. to 11.30 p.m. Sudden west wind sprang up at 11.30 p.m. and it became suddenly colder, + 37° at midnight. Slightly cloudy most of day, with some drifting fog from the ice pack. Bright sunshine from 6.00 p.m. until midnight. Wind lowered a little in evening and we sailed (or paddled, rather) at 7.15 p.m.

Travel:

Had a long delay while dogs swam (and waded) across bay. Eight dogs came bravely across, but P's big dog lagged behind.

Yellow-billed Loon:

A yellow-billed Loon "Tun-lik" flew over landward at close range.

Pacific Loon:

Several Pacific Loon (Ma-lere) seen swimming in bay and flying over. The Pacific Loon fly up quickly and readily from water without flapping along the surface like G.imber.

Eider:

Many female eiders seen.

Old-Squaw:

And male Old-Squaws seen.

Gull:

Several gulls seen. V.S. shot a large gull (L. hyperboreus) #313 female Larus hyperboreus, L. 24 1/4; W. 19 1/4; T. 8 1/2; iris straw yellow; feet creamy pink.

July 17th, 1909 (Saturday).

Weather:

M.T. + 37° + 37° at 1.30 a.m. Light northwest wind from 2.00 a.m. until 5.00 a.m. Made camp at 4.30.

Travel:

Made camp at 4.30 a.m. at mouth of a little creek flowing into a long, narrow bay, water fresh when we landed, but tide soon setting in. A long point about one mile north of us is about 3-4 miles southeast from eastern end of Pingok, a long narrow island about seven miles long, covered with little hills, (Leawitt island)

[Leffingwell]. There appears to be a lead of open water leading out to Pingok, but the ice pack appears to extend clear to land from eastern end of Pingok. Collected about a dozen species of small flowering plants, growing in sandy soil here, all colors, white, blue, violet, lavender, pink, rose, yellow. Sailed at 8.00 p.m., very light northeast wind. Were soon blocked by floating cakes of ice near land, but managed to work through, shoving the small cakes aside and going around the larger ones. Crossed a deep bay about half a mile across mouth, and wider inside, at least a mile and a half deep, with a river flowing into it from the south. Dogs had much trouble swimming across, but managed it all right, resting occasionally on floating ice cakes which were numerous at mouth of bay. Rounded a sharp point, terminated by a sand spit, [Beechey Point of Leffingwell?], and found a strong current setting in from the eastward, and ice floe jammed up close to shore about 300 yards east, with much floating ice and the pack grinding and crushing. Fog also coming up, we hastily paddled back around to west side of the point, and made camp at 10.30 p.m.

Snowy Owl:

Saw a Snowy Owl sitting on a little mound about 100 yards from coast. Crawled up behind bank, and cut off a few feathers with rifle bullet, but the bird flew away apparently unharmed.

A few Snowflakes and Lapland Longspurs seen here.

July 18th, 1909 (Sunday).

Weather:

Fog cleared away about 3.00 a.m. and sun shone for a while during forenoon. Wind northeast during early morning and forenoon. Shifted to south about 10.00 a.m. and to northwest about 3.00 p.m. + 42° at noon.

Mosquitoes:

Mosquitoes absent in early morning but came out in great abundance during warm part of day.

Flowers:

Saw several Dandelion blossoms on top of bank near coast.

(Lettingswell). There appears to be a lead of open water leading out to Fingox, but the ice pack appears to extend almost to the eastern end of Fingox. Collected about a dozen species of small flying insects, growing in early fall have all colors, white, blue, violet, lavender, pink, yellow, and black. at 8:00 p.m. very light mosquitoes, and were soon followed by flying swarms of the same kind, but managed to work through, showing the small ones, and eating among the larger ones. Growned a black fly about half a mile across water, and within landing at least a mile and a half away, with a river flowing into it from the north. Took the small trouble which was common, but changed it all right, resting occasionally on floating ice, and when were necessary at night of day. Found a black fly, collected by a small fly, (Lettingswell), and found a strong current setting in from the eastward, and the ice seemed to move about 200 yards east, with much floating ice and the pack drifting and spreading. They also coming up, we hastily pulled back around to west side of the point, and made camp at 10:30 p.m.

Swampy Bay:

Had a camp set sitting on a little island about 100 yards from shore. Growned by behind point, and out off a few feet with little water, but the birds flew away apparently undisturbed.

A few *Branta* and *Larus* were seen here.

July 19th, 1902 (Friday)

Weather:

The cleared away about 8:00 a.m. and sun shone for a while during forenoon. Wind moderate during early morning and forenoon. Settled so north about 10:00 a.m. and to northwest about 8:00 p.m. at noon.

Mosquitoes:

Important about in early morning but came out in great numbers during fore part of day.

Flowers:

Two several *Lambertia* blossoms on top of bare near camp.

Travel:

Spent day preparing specimens and watching boat, while Stefansson and Billy hunted Caribou inland. This is said to be the best deer country along the north coast of Alaska, and Stefansson has seen deer here every time he has passed here. Set fish net on west side of Point where water was free from ice and caught two whitefish and one ---. About an hour later a drifting ice cake caught in end of net and tore it badly. One fish in net when I took it up, but it escaped. Hard rain from 3.00 - 4.00 p.m. with strong northwest wind, which brought much ice back from the westward. Ice has been drifting westward all day - large cakes being shoved up slowly on end of sandspit, ploughing up sand and mud ahead of them. When wind changed to northwest we moved umiak around to east side of point. 2

Weather:

Snow flying from 10 to 11 p.m., whitening the ground. + 28° at 11 p.m. Young ice forming in sheltered cover along shore, in lee of ice floe, and quite a bit of slush, in small lumps floating in open water, in streaks.

Travel:

Moved camp about half a mile eastward to edge of the ice-pack, a broad lead having opened up on east side of sandspit.

Old Squaw:

During the day many flocks of male Old-squaws were flying west across the end of sandspit, and a few Eiders.

A few Snowflakes and Longspurs seen.

Caribou:

Stefansson and Billy returned about 3.00 p.m. They had struck a herd of 40-50 caribou, all ages and sizes, several fawns and one large buck with large horns. The caribou kept moving southeast all the time and they could not get very near to them, although they fired and missed. Billy who was nearest, said that many of the deer had good black coats now. The mosquitoes seemed to bother them badly, and they kept moving towards the wind. On the way home they saw two more female caribou, with two fawns.

Northern Phalarope:

V. Stefansson saw a flock of Northern Phalaropes, over a hundred.

Pectoral Sandpiper:

I saw about a dozen Pectoral Sandpipers in a flock a few days ago.

Semipalmated Sandpiper:

A small flock of Semipalmated Sandpipers seen.

No geese seen today.

July 19th, 1909 (Monday). West of Kuparuk River,
Alaska.

Weather:

M.T. + 26 1/2 + 29° at 2.00 a.m. Wind north-west. Cloudy until 3.00 a.m. + 35 at 8.00 a.m. Very fine snow blowing in air at 8.00 a.m. + 37 at 4.30 p.m. Dull sunshine during forenoon, bright afternoon.

Mosquitoes:

Mosquitoes absent until noon, when a few appeared on the scene again. Wind lighter in afternoon.

Semipalmated Sandpipers:

A few Semipalmated Sandpipers seen on beach and a few Longspurs.

Travel:

Stefansson hunted along coast about 12 miles as far as the Kuparuk river. He reported ice against the shore on west side of every point and a little open water on east side of every point.

Caribou:

He saw no caribou, but numerous signs of them.

Arctic Fox:

Killed two Arctic Foxes (about six miles apart) one at mouth of a burrow, and the other running about hunting.

#314 - 31331 juv.

1st Fox male. Head dusky brown, face and cheeks mixed with silvery; throat gray, washed with brownish; inside of ears buffy outside almost black. Back, shoulders and hips dusky yellowish brown, with a few sparsely scattered white hairs from head to tail. Dark stripe along back ca. 3 inches wide. Tail dusky above with thin buffy colored longer hair

obscuring ground color; tail yellowish white below. Under parts and flanks from throat to tip of tail, dirty yellowish white. Feet dusky brown with silvery mixed on upper surface. Iris brown, nose black, L. 965; T. 343; Hf. 156.

#315 - 31332 juv.

2nd Fox female. Head dusky, face and cheeks lighter than preceding (more silvery hairs). Dusky area on back much wider, extending well down on sides. (Very few white hairs on back). Tail much darker, very thin light colored hair on upper surface, and under half of tail dull buffy. Feet dusky brown, paler than preceding. Body nearly torn in two and fore leg severed by soft-nose bullet. Meas. 835 - 305 - 145.

Fish:

Caught two fish in net in afternoon, one large Salmon Trout (ca. two feet long) "Kalukpik" and one small "Kaloshuk" (sp. of white fish).

White Fox:

Billy returned about 10.00 p.m. with an adult male #316, 31333 Fox, slightly larger than the young ones V. Stefansson shot. Back bluish gray or maltese color, with numerous long white hairs. Head dusky mixed with silvery white. Belly dirty yellowish white; several patches of long white winter fur adhering to sides, but very loose. Tail buffy white with tawny brown under fur. Feet dusky, - meas., 940 - 327 - 160.

Travel:

Last night the northwest wind blowing in shore off point where we had last camp, piled up a long pressure ridge of ice about 1/4 mile off shore, about 20-25 feet high, where the day before there had been open sea, or a few flat floating cakes of ice. The ice is piled up there as high as in the winter time. Caught one small fish in net about midnight, and had to take in net on account of wind shifting and bringing in floating ice.

July 20th, 1909, (Tuesday).

Weather:

M. T. + 27; +30 1/2 at 1.00 a.m. + 42° at 12.00 m. Light east wind in morning, northeast in afternoon and ice slowly floating westward. Bright sunshine all day. Dried out stuff wet by yesterday's

observing ground below; tall yellowish white below.
Under parts and flanks from throat to tip of tail
dirty yellowish white. Feet dirty brown with
slightly mixed on upper surface. Tail brown, base
black. L. 650; T. 250; W. 120.

3111 - 3112 (1900).
One low female. In at dusk. Feet and under
lighter than preceding (more dirty white). Dark
area on back lower than preceding well shown on
side. (Very low white line on back). Tail much
darker. Very thin light colored line on lower
surface, and under half of tail dirty white. Feet
dirty brown. Same than preceding. Body nearly
same in size and color as preceding. W. 120.
3113 - 3114 (1900).

Flight
Caught two birds in net in afternoon, one large
Salmon trout (or two) and one "Kahawai" and
one white "Kahawai" (egg of white fish).

White Egg
Bird returned about 10:00 p.m. with an egg.
Male 3115, 3116 (1900). Slightly larger than the female
over 7.5 inches long. Black line on upper
color, with dusky line along white line. Head dark
mixed with dirty white. Wings dirty yellowish
white; several feathers along white line. Tail
adhering to others, but yellowish. Feet dirty
with dirty brown. W. 120. 3117 - 3118 (1900).

Travel
Last night the night wind blowing in from
off point where we had camp, first at 10:00
pressure rose to the usual 1.1 mile off shore. About
10:00 feet high, where the day before there had been
open sea on a low flat lying area of land. The
ice is piled up there as high as the wind. Time
Caught one small fish in net about midnight, and had
to take it out on account of what catching and bring-
ing it home.

July 20th, 1900. (Monday).

Weather
W. 1.1 + 27; + 30 at 1:30 p.m. + 32 at 10:10
E. Light east wind in morning. Pressure at 10:00
noon and low about 1.1 mile off shore. Bright sun
after 1:30. Dried out night and in morning.

rain. Almost no bird life here. Wind died down about 9.00 p.m. + 38° at 11.00 p.m. Too much floating ice all day to set fish nets.

Snowy Owl:

Saw Snowy Owl sitting on tundra about 500 yards from camp, but it soon flew away.

July 21st, 1909 (Wednesday).

Weather:

M.T. + 38° + 46° at 4.00 a.m. Wind freshened after midnight clearing most of the ice out of lagoon between here and the chain of small islands 3 or 4 miles out. Cloudy. Brisk shower 4.30 a.m., but lasting only a few minutes. Cloudy until about 9.00 a.m.

Travel:

Started east at 7.00 a.m. paddling across bay 1 1/2 miles to point, crossing shoal between point and long sandspit, submerged at high tide. Then tracked with dogs about ten miles. Entered sheltered bay at mouth of creek about one mile west of western mouth of Kuparuk river, about 11.00 a.m. on account of rising waves. Wind continued to rise steadily until 3.00 p.m. and continued to blow rather hard all night - breakers pounding on beach. A few large granite boulders in low water a few miles west of Kuparuk (ca. 2' or 3' in diam.), water 5-6 feet deep close to shore all along. Cut earth banks 8'-10' feet underlain by ground ice, and sand and gravel beach.

Flowers:

Dandelions in blossom, common on banks; leaves small and sparse).

Pacific Eider:

A flock of 12-15 male Eiders (white backs) seen flying west, - the first males seen since June 30th. Female Eiders seen in small bunches (2-6) all along coast, and numerous male Old-Squaws.

Golden Plover:

Saw one flock of eight American Golden Plovers running about on top of high dry bank.

Geese:

No geese seen. Two days ago Billy saw many geese inland. Few would fly and most of them swam out into the lakes. He thinks they are beginning to moult.

Black Brant:

Two years ago Stefansson chased Black Brants between here and Colville, at this season, which were unable to fly,,and were accompanied by young nearly grown.

Fish:

Set nets outside bar and caught five Anark'bluk and one Kaloshuk.

Travel:

Water very roilly from waves.

A few Snowflakes seen at places where shiftwood was piled up, and a few Longspurs and Gulls.

Billy paddled Kayok up little stream in evening to look for deer, but saw none. Mirage very bad. It is very hard to hunt inland at this season. Mosquitoes are troublesome whenever it is at all warm, or wind is not blowing strongly. A great portion of the country is covered by ponds, lakes and marshes; and a slightly cold wind raises a fog very quickly, and bright sunshine immediately cause a mirage, so that small objects are magnified and stationary objects appear to move about. A Longspur may look like a Goose; a Jaeger like a post, or a Goose like a caribou. The best time to hunt is about midnight, when the sun is low and during the early morning hours, if there is no fog. At that time of day the mirage is less troublesome.

July 22nd, 1909, (Thursday). Kuparuk river delta, Alaska.

Weather:

M.T. + 42°. Slept until about 2.00 a.m., nearly twelve hours, having slept only two or three hours the night before, and very little for two or three days. Wind still strong from northeast. Bright sunshine until 12 m.

Travel:

Wind moderated about 3.00 a.m. and we started east again at 6.00 a.m.. One large Kalukpik and 11 Kaloshuk in two nets - nine fish (including Salmon Trout) in net outside the bar in salt water, the others in river. Last night six fish - one Kaloshuk and five An-ark-hluk. Tracked along beach to western mouth of Kuparuk (Kopowra on 1906 map) river, when wind shifted to southwest. Stopped a little while at three recent house ruins on west bank. Sailed across channel to fairly deep water (5'-6') at 10 yards from shore. Crossed mouth of a second channel (with small

islands about 400 yards outside on which many large gulls were resting. They flew up screaming when we sailed by but we did not stop].

Golden Plover:

Flock of seven American Golden Plovers seen just at west edge of delta.

Travel:

Water shallow (1'6" to 3-4'), and a long series of mudflats ahead. Wind shifted to northwest, causing heavy sea and breakers on flats. Put back into second channel (channel over eight feet deep close to west side), and sailed up stream 3-4 miles, intending to come down a more easterly channel and avoid the worst mudflats. Current swift, bottom covered with large pebbles, banks, high, sandy earth cuts, (level in most places), but at intervals there are little bunches or series of high sand ridges. Landed several times to scan the country for caribou.

Flowers:

Collected several species of flowering plants growing on sandy ridges (some of which I have not observed before).

Caribou:

Stefansson sighted a herd of caribou (at least 100) along the crest of a series of low sand hills to eastward, and moving quite rapidly seaward, against northwest wind. We took the boat down stream about 1/2 mile, hoping to approach near enough to intercept them without being tangled up among the numerous delta channels. The caribou now seemed to have turned about and were moving southeast with wind, so we took the boat up again a little beyond our first observation point. We were stopped by shallow water and had to leave boat, P. remaining to make camp (about noon). Billy, V. Stefansson and I went after the caribou, portaging Kayak across country about 300 yards to next deep channel, and ferried across one man at a time, hauling Kayak back each time with track line (channel about 75 yards wide and 4-6 feet deep. Found out later that we could have gone up around a bend about 300 yards south, where the river splits into three channels (with shoals) and is easily forded. Approached within 800-1000 yards of the caribou along a little creek valley, and as they were moving steadily southeast we separated, to form a line across their path, in a bow shaped formation,

and intercept them; whichever way they broke on discovering us. V. Stefansson worked across a line of hills to eastward, while I remained on west flank. A bunch of half a dozen, two does with fawns, came within 500 yards of my front, while the main body kept along the ridge moving directly towards Stefansson's position, feeding as they moved. I counted 145 in sight at one time and a number of others came out from behind hills later, so I believe there were at least 175 in this herd. The large bunch on the hill were startled once (probably from catching scent of camp, having moved nearly into line with its bee), turned and ran 200-300 yards back, stopped and began to work east. A single fairly large buck wandered out on flank of herd and sighted V. Stefansson who killed it by a shot through shoulders. The main bunch kept moving east or northeast. We joined forces again, disembowelled the caribou, and, as the main body of caribou were quietly grazing on the north side of a long lake about a mile north of us, we started after a couple which V. Stefansson had seen at first about a mile from the other bunch. They soon caught our wind and we kept on going east wading over perfectly flat, swampy ground, with many lakes and ponds, hardly a solid spot of ground. Lake proved to be about two miles long and $1\frac{1}{2}$ to 1 mile wide. Met another herd of caribou, about 75, moving southwest, east of lake. Lay down behind a ridge and waited for them to come to us. V. Stefansson and Billy opened the firing on the right, three females dropping on the spot, and four more females, males and one female fawn a little further on and scattered. The herd, as usual ran a little way, stopped to look around, and retreated again. Before we began firing, we had noticed another bunch of caribou, a mile or two southeast further inland, probably 300 caribou within field glass vision at one time.

Mosquitoes:

Now about 4.00 p.m. the wind died down and as the day was very warm, mosquitoes appeared in countless swarms, causing great annoyance, while we were skinning deer, and traveling home.

Caribou:

Two fawns returned, looking for their mothers, and wandered about, 400-500 yards away. They afterwards came within 50-100 yards of Stefansson who was lying down, but a cloud of mosquitoes repeatedly flew into his face while he was taking aim, and fawns took

alarm and had run some distance before he fired and missed. Skinned and measured two caribou for scientific specimens.

#317, caribou female fawn. Length (nose to tip of tail 49 inches; height at shoulders, 33; depth chest 12 1/2; tail 5. Coat mostly mouse gray, the tawny brown fawn colored hair worn at back, having all fallen from back, a few bunches remaining on nape of neck, and considerable on flanks and belly. Horn velvety, about four inches long nearly straight. Stomach full of grass, no milk.

#318, female caribou (adult) Length 75; Height at shoulders 42 1/2. Depth chest 19; Tail 6. Most of old coat shed, some old patches of hair on sides, and belly. Back neck and shoulders dark grey. Head black.

Another female, apparently same age, nearly had much more old hair and the sides of neck with a tawny tint to the grey. Some caribou in the herd appeared almost black, particularly two large bucks with large nearly grown (?) horns; while a few were still nearly white. Hair much better and longer than 11 days ago, good enough for clothing. Total killed today, seven adults and one fawn, ♂ ♂ ♀ ♀ ♀ ♀.

Weather:

Rain falling all evening. Calm until a few minutes before midnight, when a violent gust struck us from southwest and blew all night, taking umiak across river.

July 23rd, 1909 (Friday).

Weather:

M.T. 35°. Wind southwest all day. Cloudy forenoon. Sunshine afternoon. Light snow falling at 8.00 a.m. Cloudy after 10. P.M. and misty rain after 11.00 p.m.

Caribou:

Skinned head and feet of fawn killed yesterday and cleaned skull. V.Stefansson went out to hunt for a more easy route to the slain deer than the long cross-country swampy portage we made yesterday. Decided it would be easier to take umiak down to sea and portage meat thither. Billy and I went out after the first caribou killed yesterday (male). It was in fine condition, - some back fat and considerable fat on haunches, sides and intestines. Marrow white, firm

and sweet. Most of old hair had been shed quite uniformly, instead of in patches. The loose hair which remained brushes off easily.

Black-bellied Plover:

Saw a pair of Black-bellied Plovers.

~~Snowy~~
~~Swampy~~ Owl:

Also a ~~Snowy~~ Owl.

Parasitic Jaeger:

A pair of Parasitic Jaegers.

Longspurs:

A few Longspurs.

Snowflakes:

A few Snowflakes.

Red Phalarope:

Red Phalaropes fairly common, still in red plumage.

Pectoral Sandpiper:

Billy found a nest of Pectoral Sandpiper about one hundred yards from camp. four eggs. He set a snare for the bird, but she carried off snare, stick and all. V. Stefansson flushed a Sandpiper on low land between two rivers, and marked spot. I went over about eleven thirty p.m. and flushed a female Pectoral Sandpiper from a set of four eggs. She remained on the nest until I nearly stepped on her, then fluttered away along grass tops, in a bee-line for about 40 yards, then stopped. As I followed she would fly a few yards further and longer at each flight and I could not get near. I lay down near the nest and the bird came back to investigate, but did not resume sitting. Nest in a thick clump of grass on low damp ground (no water); a fairly deep hollow in the ground, lined with dead grasses and leaves. Four eggs, incubation advanced; nearly ready to hatch.

Black-throated Loon.

Flushed a Black-throated Loon from a little pond which circled around several times screaming and half an hour later a pair from the same pond. I walked around pond but could not find nest. They rose from water by flapping and splashing along surface. I have seen the Red-throated Loon rise directly from water like a duck.

Went to sleep while lying down watching the Pectoral Sandpiper's nest and did not wake up for an hour and a half until the rain had nearly soaked me through.

July 24th, 1909 (Saturday). Kuparuk River, Alaska.

Weather:

M.T. + 42 + 44 at 2.00 p.m. 44° at 6.00 p.m.
Temperature of river water 48° at 6.00 p.m.

Travel:

River fell from 8" to one foot yesterday afternoon, leaving boat stranded. Water rose about one inch today before 3.00 p.m. We had to unload boat, put on half a load in mid-stream, portage the other half about 150 yards down stream beyond a series of gravel bars, and re-load there and put on camp gear. Started down stream at 5.00 p.m. with brisk southwest wind. Wind southwest all day until 9.00 p.m. when it shifted to south and south-east. Cloudy most of day with occasional bright spells alternating with light sprinkling showers every hour or two.

Pectoral Sandpiper:

Collected set of Pectoral Sandpiper's eggs which Billy found yesterday. The bird returned to the nest repeatedly, but avoided the snares. Four eggs, incubation advanced. One egg infertile..

Travel:

Found a fairly deep channel out of the river as far as the line connecting the headlands on either side. Outside of this water was very shallow, although few mud-flats were visible. The depth of water was somewhat variable, due to low bars, and we had to continually jump out and wade out far on either side to find a channel 18" deep, enough to float our boat, then drag boat across shoals to channel. Had difficulty paddling boat to mainland against southeast wind. Tracked boat as far as old cache and made camp [Near Point Storkerson of Leffingwell, B.IV], while Billy paddled Kayak across bay to look for dogs which had failed to follow around. Many boulders in water near shore. Saw a few large fish swim out from shore. This point is said to be a famous fishing place. Many old camp traces, chips, bones, shavings, etc., here.

Gull:

A number of Gulls seen on sandflats. In the mirage a single Gull often loomed up like a post or a lighthouse.

Black-bellied Plover:

Black-bellied Plovers seen near camp. Had shower about midnight.

July 25, 1909 (Sunday).

Weather:

M. T. + 37° + 45° at 11.00 a.m. Strong northeast wind after 8.00 a.m. As the waves were breaking too strong we had to unload and beach the boat. Bright sunshine all day and night. Sun is getting very near the horizon at midnight. Chilly all day, in spite of sunshine. Wind blowing from ice-pack not more than 2 miles off shore.

Travel:

Billy, V. Stefansson and I started after meat with seven pack dogs at 2.30 p.m. After making some long detours around long lakes and marshes we reached the meat caches about 6.30 p.m. T

Glaucous Gulls:

The Glaucous and Glaucous-winged Gulls had touched every cache picking off much meat and fat. One deer which had been disembowelled and left unskinned had a large patch of skin on rump and hip picked off and most of the back fat, and half the saddle eaten. At another place they had eaten a double strip of "back sinew" meat which I had skinned, leaving back-meat, they had torn up most of back and picked the ribs clean. Several Gulls and a pair of Parasitic Jaegers were hovering overhead in noisy protest.

Travel:

Packed home all the skins and meat of three deer, and parts of two others, leaving the remainder for tomorrow. Each dog carried a pack-saddle weighing about 50 lbs.

Long-billed Dowitcher:

While crossing a low place between two large lakes intersected by numerous little ridges of more dry moss we flushed a Long-billed Dowitcher (?) which fluttered away through the grass as if she had a nest. When I stopped to look around she returned, approaching slowly with wings half spread, and uttering a low note of protest. Careful search by three of us failed to reveal a nest, so we went on about 200 yards and lay down, watching with field glasses. The bird flew nervously about from spot to spot, sometimes running, sneaking or crouching in the grass. Finally she settled down in a clump of grass, Stefansson advanced, the bird flew up when he was about 20-30 yards away, but advancing to the spot he picked up a single downy young bird, apparently not more than a day old. No sign of a nest or of other

young birds, although we searched carefully. The old bird remained most of the time within 12-15 feet of us, so I could examine her very closely. Young bird many colors. Above variegated, crown umber brown, bordered by white strip, and a light brown one below this, cheeks whitish; neck tawny. Back darker, feathers mostly black at bases, some with sienna brown and some with silvery tips, giving a frosted appearance. Throat buffy lower throat and breast ochraceous, belly paler; bill gray; feet greenish gray; mottled with dusky #319 ♀ (?).

Willow Ptarmigan:

Our dogs flushed a female Willow Ptarmigan and a brood of nine or ten young at base of a low hill. The young sprang about ten feet into the air and flew in all directions, dropping to the ground not more than 10-15 yards away and hiding in the short grass. I marked one alight and caught it after a short chase. The short grass did not afford much concealment, and it tried to escape by running and flying a few feet at a time. Billy caught another one, but we could find no more. The female bird fluttered along the ground and the dogs pursued her nearly half a mile.

#320 Willow Ptarmigan juv. ♂ (?)

#321 " " " ♂ (?)

Back, wings, tail, sides of breast and flanks barred and mottled black, brown and white, like adult female; belly pale yellow, breast ochraceous yellow; throat yellow. Crown umber brown, bordered by a narrow black line, extending along nape of neck to back. Cheeks yellowish, a black stripe from posterior and of eye to a point behind auriculars. Bill black.

Black-bellied Plover:

On our way home, about four miles from coast, saw a Black-bellied Plover running about uttering a plaintive cheep, or a melancholy tu-lik. When I lay down she ran up within 10 yards of me, and then turned and ran away in a crouching attitude, with wings slightly drooping. Billy soon found the nest, four eggs, arranged with points together in a slight depression in a dry patch of tundra, between two hills. Ground covered with dull gray moss, with occasional tufts of grass. Nest lined with white lichen fibres. One egg was slightly dented from inside and taking it up I could hear the chick inside chirp occasionally, so I left the eggs.

Red-backed Sandpiper:

Saw several Red-backed Sandpipers singly and in bunches of four or five.

Pectoral Sandpiper:

A few Pectoral Sandpipers and Red Phalaropes.

Several pairs of Red Phalaropes flew about peeping as if they had young.

A few female Eiders seen.

Old-Squaw:

A few female Old-Squaws seen and a flock of about a dozen small Gulls in a little lake.

Travel:

Had much trouble crossing a labyrinthine marsh near camp. There was a perfect maze of blind channels and bridges ending in deep grass-concealed ditches, which proved to be impassable. Tried several times to find crossing place, but failed and had to go around far to westward. Dogs with packs, sighted camp and made straight for it, ending up by striking end of some narrow peninsula and lying down. As they generally refused to come back, we had to go out for them and bring them around a long task, as they were badly scattered.

July 26th 1909 (Monday).

Weather:

M.T. + 32 1 2°. + 32 1 2° at 2.00 a.m. + 38° at 2.PM. Bright sunshine. Fog at 12 m. Wind still strong in northeast.

Fish:

No fish in nets this a.m.

Travel:

Skinned three birds and head and feet of one caribou skin. V.Stefansson and Billy went after meat. They found dog "Roger" by meat cache, stuffed full. He had cracked and eaten marrow from over a dozen marrow bones which we had roughed out, and also eaten a good many ribs, leaving the solid meat.

Black-bellied Plovers;

V.Stefansson examined the Black-bellied Plovers nest found yesterday. The eggs were still unhatched, although the young birds were "peeping" inside. Fog cleared away about 6.00 p.m. and sun shone all night.

July 27th, 1909 (Tuesday).

Weather:

M.T. + 36. +36° at 2.00 a.m. + 54° at 2.00 p.m. + 40° at 7.00 P.M. Strong northeast wind all day. Bright sunshine all day.

Fish:

NO FISH IN NETS.

Took picture of large rack covered with drying caribou meat, with camp in background 11 1/75
B.S. 5.00 p.m. Waves too high to sail with our heavily loaded umiak. Stefansson says that Captain Cottle with "Beloidere" sailed by here two years ago today, - the earliest date on record for the whalers to go east. "Re-made" some salted bird skins and packed some eggs. Finished blowing some Ptarmigan eggs which have been "digesting" with solution of pancreatin. Process very slow because eggs have been cold most of the time. V.Stefansson and Billy went out to look for deer in the evening but returned soon, about midnight, as wind died down for about an hour.

July 28th, 1909 (Wednesday)

Weather:

M.T. +36° + 36° at 1.00 a.m. + 39° at 3.30 p.m.
Wind breezing up from northeast, stronger than ever after 3.00 a.m. and sky becoming cloudy.

Travel:

V.Stefansson discovered an umiak beating up the coast westward against a strong northwest wind about 7.00 a.m. It proved to be Fred Arey and son "Gallagher" going to Point Barrow. They reported that the ice is jammed up against the point 3-4 miles east of here,

[Point McIntyre of Leffingwell, Pl.IV], and is going out of the lagoon between mainland and chain of outside islands with a rush. Arey's boat was obliged to run outside the sandspits with the moving ice, and they were obliged to camp over night on a cake of grounded ice, and eat raw fish.

Caribou:

He Ned Arey reports few caribou to eastward, - none on Salirochit, Kugura, or Shavirovik. Iakuk had killed two in May in foothills back of Camden Bay. Many people now at Flaxman Island at trading rendezvous, with little grub.

Black Brant:

He said he had collected over fifty Black Brant's eggs one day on a little island back of Long Point (Camden Bay), and his boys had found several Swan's nests (more than ever before).

Pacific Eider:

He had examined over twenty Pacific Eiders nest on a sandspit a little way east of here [Egg Island or Stump Island of Leffingwell Pl.IV], but found neither eggs nor young birds. Young gulls seen, now able to fly.

July 29th, 1909 (Thursday).

Weather:

M.T. + 36°. Strong northwest wind all night; heavy surf wind dropped about 6.00 a.m. and shifted to north. Dense fog.

Travel:

Made preparations to start east intending to work east 5-6 miles along shore of a large bight, to long point west of Sharavanaktok (Sawanukto) delta. Wind changed to northeast about 7.00 and became too strong for sailing. About 10.00 a.m. two umiaks of Cape Sing the traders (men, women and children), drifted in out of the fog. They said the bulk of the trading fleet were ahead and at least two umiaks were behind.

Black Brant:

One boat had about a dozen Black Brants (*Branta nigricans*) and five Lesser Snow Geese (*Chen hyperborea*), killed near Cape Halkett. All had shed the wing quills and were unable to fly. Measured several Snow Geese. Bills of Snow Geese averaged from 1.90 to 2.25; tarse 2.75 to 2.90. The vicinity of Cape Halkett is said to be the most famous hunting ground on the coast for killing moulting geese. In the days before fire-arms were generally used by Eskimos the place was frequently visited during the moulting season.

Travel:

Mr. Arey says that the present season is the latest, as to ice conditions, etc. which he has known during 8-10 years on this coast. Two more umiaks sailed by about noon, outside the sandspits, but rounded them and put back. One boat belonged to Sharawanna, "Pretty Boat-header" the other to ----. Sharawanna was with the party of fifteen who were carried off with Jack Hadley in two of Brower's boats at Cape Smythe last May. They were drift "five Sundays" and landed near Cape Lisburne. They killed two Polar Bears and were not hungry, but suffered greatly from lack of tobacco. Capt. Klingenberg and Mr. Storkerson, who went adrift shortly after the other party came safely to land near Icy Cape.

July 30th, 1909 (Friday).

Weather:

M.T. + 34 + 38 at 9.00 a.m. Strong northwest wind. Less fog than yesterday, but variable and shifting. In camp all day +36° F. at midnight.

July 31st, 1909 (Saturday)

Weather:

M.T. + 35° + 42° at 6.00 a.m. Wind in west at 5.00 a.m. and continued fairly strong until about noon, then light west wind until 8.00 p.m. when it shifted to northeast. Sunshine at intervals all day, flying clouds.

Travel:

Sailed east at 7.45 a.m. The Point Barrow boats lightened us by taking part of our load, about 150 lbs. ammunition, 300 lbs. flour, beans, rice, etc., 150 lbs. skins, etc., 200 lbs. tobacco and two dogs (about 900 lbs. in all). Sailed across two small bays to a long point, dogs following on land. Dogs balked at 9.00 a.m. and V. Stefansson went back after them. They started back to Ned Arey's camp, he chasing them. He said that they stopped to look at him several times at not more than 200 yards then turned and ran on. He does not believe that dogs can see distinctly at more than 200 yards. When they finally recognized him they came running up with great joy. Loaded dogs in boat and started ahead about 11.45 making E.S.E., across a large deep bay [Prudhoe Bay; Leffingwell, Fl. IV], at least 8 or 10 miles across mouth, and crossing some distance inside mouth we could not see the land at southern end. After sighting land on eastern side, we headed more to northeast cruising about half a mile off shore to point [Heald Point, Leffingwell, Fl. IV], at western edge of Sawannkto [Sagavanirktok, Leffingwell], delta reached 2.00 p.m. Water whitish with mud for some distance west of point. Water in bay over eight feet deep, one mile off shore. Shoal for half a mile off point, less than 18 inches, and we had to alternately paddle and drag the boat nearly straight off shore for about a mile then gradually worked northeast, keeping about three miles outside the string of small flat topped islands across the mouths of the river, keeping in about three feet of water. The main stream seems to come out rather more than half way to eastward, [east of Anxiety Point, (of Franklin) on Howe Point, (Leffingwell)], just west of the largest island [Foggy Island, Leffingwell, Fl. IV]. Putelarayuk's cache is on this island. Fairly deep water close in shore here. Island covered with tundra and small ponds. Arrived here 8.00 p.m. and had lunch.

Snow Bunting:

Numbers of Snow Buntings, seen on island.

Longspur:

Longspurs seen on island and a few

Gulls

On sandbar west of island.

Pacific Eider:

Large flocks of male Eiders (large species with back white and under parts black), were flying west all day, in flocks of 50 to 100 going low over the water in dense bunches, sometimes giving the appearance of land rising on the horizon.

Black-throated Loon:

Passed a pair of Black-throated Loons in water at fairly close range.

Travel:

East of Putelarayuk's island, there is another large bay, 8-10 miles across to mouth of Shaviovik river. The eastern mouth of Sawannkto [Sagaranirktok Leffingwell, Pl. IV], enters a lagoon just east of island, coming from southwest. Lagoon sheltered by a string of sandbars at entrance. A few high "pingoks" visible at bottom of bay. Stefansson's party killed several deer there last fall. Left Putelarayuk's island at 9.00 p.m. and wind being too strong to make across to Shaviovik, we sailed and paddled down the bay, making camp about midnight in a little sheltered cove. Sun set tonight. It probably went under two or three days ago, but cloudy weather has hidden the sun for several days. [West of Kadleroshilik River, Leffingwell, Pl. IV],

The Sharavanaktok (Sawannkto on 1906 map), flows out at end of a long broad peninsual, probably built out by river, with a large deep bay on each side 8-12 miles across, not marked on charts. Either one is as large as Harrison Bay [Prudhoe Bay on west, Foggy island Bay on east side; Leffingwell, Pl. IV].

August 1st, 1909 (Sunday).

Weather:

M.T. + 32° + 33° at 2.00 a.m. sunshine bright in forenoon. Strong northeast wind, heavy swell and breakers. Dense drifting fog after 4.00 p.m. Billy and I ascended a high isolated hill about 1 1/2 miles to southwest and looked over the country. No game seen.

Pectoral Sandpiper:

Flushed a Pectoral Sandpiper which seemed to have young near by, as she fluttered along and crouched on the ground, uttering a plaintive "peep".

Red-backed Sandpiper:

Saw one pair and one single Red-backed Sandpiper (black patch on belly still remaining).

Semipalmated Sandpiper:

Saw a few Semipalmated Sandpipers.

Lapland Longspur:

Saw several Lapland Longspurs (old and young) and young Snow Buntings flying about.

Ned Arey says that according to Sakavaichi, the Point Barrow traders are due at Flaxman island when the young Amanlik (Snowflakes) are able to fly.

August 2nd, 1909 (Monday).

Weather:

M.T. + 30° + 42° at 12 M. Strong northeast wind all day. Sunshine for a little while in afternoon. Fog at intervals.

Snow Bunting:

A few Snow Buntings around camp two or three adult males with stub tails;

Longspur:

Also a few Longspurs seen.

Weather:

Fog so dense at 11.00 p.m. that every grass blade was covered with drops of dew and everything outside was wet. One could not see 100 yards.

Travel:

Billy was anxious to get to Flaxman Island before the traders left that place, and started about midnight to walk to Flaxman Island, taking six dogs with him. He thinks he can ford the Shaviovik river. Small river a little way west of Shaviovik is called Kaliroshilik, from a high and conspicuous hill which it passes, about 15 miles inland. Creek too deep to ford near its mouth [Kadleroshilik; Leffingwell, Pl. IV].

August 3rd, 1909 (Tuesday).

Weather:

M.T. + 33° + 37° at 5.00 a.m. Northeast wind

died down about 2.30 a.m. and light southwest breeze sprung up at 5.00 a.m. Very little fog. Tide a foot lower than last night.

Travel:

Sailed at 7.00 a.m. Wind went down before we reached point southwest of Shaviovik, [Tigvariak island; Leffingwell Pl. IV], Island. Struck shoal water and had to make a long detour westward to go around a long sandspit on west end of island, [Lion point, Franklin, Leffingwell, Pl. IV], Deep water at end and outside of island, and ice cakes grounded all along north side. West end of high land marked by a large beacon or lookout built of driftwood. Here the natives used to camp in summer and watch for passing ships. One old house and an ice house on island. Going east from island (left 1.30 p.m.) we had to paddle against northeast wind, stronger towards evening [Mikkelsen Bay, Leffingwell Pl. IV], and did not reach mainland (ca. 8 miles east of island) until nearly 10.00 p.m. [Point Bullen, Franklin, Leffingwell, Pl. IV], North of Shaviovik Island the ocean appeared to be free from ice except for occasional cakes. The bay east of island was filled with floating masses of ice for two or three miles off shore. Ice loose and floating, with channels between cakes in most places.

Bearded Seal:

Saw several Natjuk (small seals) and several Ugruk (bearded large seals) while crossing bay. The Ugruk generally plunge forward when going down and show the back and often the hind flippers making a great splash. The Natjuk usually settle quietly down, without causing more than slight ripple.

Caribou:

Found Billy with his dogs at end of a long sandspit [Point Bullen, Shavogyuak] about 12-15 miles west of Flaxman island. He had run into a herd of fourteen caribou in the fog last night near Shaviovik river, and lost three dogs. He succeeded in holding back three dogs and found the others in the morning. Although very close to deer the dogs prevented him from shooting.

Red-throated Loon.

He killed one Red-throated Loon.

Semipalmated and Pectoral Sandpipers:

Saw three Semipalmated and one Pectoral Sandpipers on Shaviovik Island.

Arctic Tern:

Saw an Arctic Tern.

Snowflake:

Saw a few Snowflakes.

Parasitic Jaeger:

Saw a Parasitic Jaeger.

Gull:

Saw a few gulls flying over.

Travel:

Camp tonight at little sandspit behind a little brook which affords good protection from north and east winds. Spot marked by three upright poles about 300 yards from end of sandspit.

Weather:

+ 35° at 10.30 p.m.

August 4th, 1909 (Wednesday).

Weather:

M.T. + 35°: Sunshine in morning. Strong north-east wind.

Travel:

Started east about noon, tracking along beach with four dogs in harness. Deep water close inshore; beach coarse, loose gravel. Several lagoons along shore, with open inlets which we had to paddle across. Wind died down about 3.00 p.m.

Weather:

Black rain clouds appeared in south and broke out in a brisk shower, accompanied by several loud peals of thunder, and some flashes of lightning (first thunder or lightning I have observed in Arctic). Strong northwest wind came up suddenly about 6.00 p.m., very hard for half an hour, then dying down; freshened again about 9.00 p.m. and blew strong all night.

Mosquitoes:

Numbers of mosquitoes seen along sandbars, - first seen since July 23rd.

Travel:

Reached Flaxman Island about 11.00 p.m. and

and camped at west end of tundra land. Plenty of wood on west sandspit.

Saw many Old-Squaws, a few female Eiders, Snowflakes, Lapland Longspurs, one Parasitic Jaeger, and a few Gulls.

Weather:

Showers at intervals all day, with occasional gusts of warm, almost hot, wind from northeast.

August 5th, 1909 (Thursday).

Weather:

M. T. + 38°. Wind west, very light at 9.00 a.m. Light sprinkling rain. Wind southwest after 10. a.m. and increased all day.

Travel:

Sailed umiak around to Leffingwell house and took on board a few goods which we had cached there. "The Duchess of Bedford" had broken from moorings and drifted across to mainland nearly opposite house. Sailed to Sakawanna's house at east end of island, and remained behind sandspit for several hours (until about 8.00 p.m.).

Semipalmated and Pectoral Sandpipers:

Numbers of Semipalmated Sandpipers and a few Pectoral Sandpipers, two Black-bellied Plovers, a few Lapland Longspurs, one Snowy Owl, numerous Snow Buntings (both adults and young) seen on Flaxman Island.

Travel:

No people on island. Everybody camped at point [Brownlow Point, Franklin] near western mouth of Kuguar [Canning River, Leffingwell, Pl.V], with Cape Smythe traders. Northeastern end of Flaxman Island breaking down fast; great masses of earth and ground ice continually breaking loose and falling down into water. Few boulders on east end, but very numerous all along south and west end of island, and lying imbedded in tundra on top of island. Ground ice apparently not continuous, i.e., has great fissures filled with mud. Earth stratified in places, some brown rotten peat, black mud, bluish clayey "silt" and some places ochraceous.

Late in afternoon, Ilavinirk accompanied by Pikalo and ----- sailed our whaleboat across against headwind, and we loaded part of our stuff, dogs, etc., in whaleboat and crossed over to Eskimo

camp on Kugura (Canning) River. He has repaired and repainted the whaleboat and spent summer around mouth of Hula-hula and Barter Island.

Caribou:

No deer were seen and few fish caught, as water was too clear for gilling. He killed two Seals, and plenty of Ducks and Geese. Pikalo killed one deer near Collinson Point. Auktelik and Kopak have crossed the mountains via Hula-hula pass, to hunt for summer deer skins, sledding over.

August 6th, 1909 (Friday).

Weather:

Trading rendezvous at mouth of Kugura river, southeast of Flaxman Island, M.T. + 38 + 38° at 3.00 a.m. Wind died down about 3.00 a.m.

Trading Rendezvous:

A number of people are here from Herschell Island. One sloop, sailed Ninaksak, formerly owned by Mr. C. Stein, and two whaleboats. 31 tents in camp, 5 whaleboats and 17 umiaks. A few fish are being caught, but the time is mainly given up to bartering goods. A few Snowflakes flying about 6.00 p.m. Southwest wind all afternoon and evening.

August 7th, 1909 (Saturday).

Weather:

M.T. + 32 + 38 at 12 M. Southwest wind all night and still blowing at noon. Takuk sailed for Herschell Island during the night. A few snowflakes in air at noon. Small pellets of hail or sleet fell at intervals during afternoon.

Fish:

A number of fish (white-fish and salmon trout) caught last night.

Eskimo Trading:

Billy traded for a 30-30 Winchester and about 500 cartridges, with other things, giving the Sakawanna umiak a wolverine skin, badges, skin coat, etc., to his "partner" from Point Barrow.

Travel:

Pannigoblok decided to go east with our party. Yesterday she could not go, as her mother had come down from the east, with the intention of dying here next

winter. Today the old lady thinks she would prefer to be buried at Herschell Island, and thinks she will stay with her son, as he has a sloop and could probably carry her remains to that place. The old lady is apparently in good health, but everyone resents the imputation that she will not die the coming winter, because she has said that she will.

Travel:

Sailed east at 7.00 p.m. with fair wind, accompanied by Pikalo and his father Kunarilek with whaleboat Ninaksak took about 1000 lbs. of our goods in his sloop, I going with him in sloop. The rest of our party in our own whaleboat and umiak. Reached Long Point (Konganevik, Leffingwell, Pl.V), west of Camden Bay about midnight and stopped for lunch.

Old-Squaw:

V.Stefansson shot five Old-Squaws here, many seen.

Weather:

Clear night, cold; water freezing in little ponds.

August 8th, 1909 (Sunday).

Weather:

M.T. + 28. + 28 at 1.30 a.m. + 32° at 2.00 a.m. Wind died down towards morning.

Travel:

Made camp at 6.00 a.m. on a long sandspit a little west of mouth of Salirochit river (about five miles east of Collinson Point [Anderson Point, Leffingwell, 1919 Pl.V], went up on hills at mainland to look for caribou, but saw no traces. Lost Cartridge belt with about a dozen mannlicher cartridges.

Rock Ptarmigan:

Flushed a flock of eight Rock Ptarmigan and killed one. They were tame, running along ground at about 30 yards distance, and not flying more than 100 yards when flushed. The one killed apparently was a young bird, back very finely barred with gray and blocked. Wings white.

Golden Plover:

Saw four American Golden Plovers.

Snowy Owl:

Saw a Snowy Owl.

Red Phalarope:

Saw a few Red Phalaropes (now in fall plumage, belly whitish).

Semipalmated and Pectoral Sandpipers:

Saw a few Semipalmated and Pectoral Sandpipers, Snowflakes, and Longspurs.

Mosquitoes: Fairly numerous on tundra in forenoon.

Pintail:

Going back a second time after breakfast to look for cartridge belt I saw a flock of about a dozen Pintails on grassy shore of lagoon, and one Marmot at entrance to burrow on cut bank of sea-coast.

Weather:

Sunshine all day. 23 fish (mostly Kalukpik) in nets this p.m.

August 9th, 1909 (Monday).

Weather:

M.T. + 35° + 52° at 6.00 p.m. Cloudy northeast wind. Wind shifted to southwest about 9.00 p.m..

Travel:

Sailed east at 11.00 p.m. light rain falling. Went over to mainland in evening.

Birds:

Saw three or four American Golden Plovers, Snowy Owl, and a flock of Pintails. A few Old Squaws in bay, and a few Semipalmated Sandpipers along shore.

Fish:

Six fish in nets in evening.

August 10th, 1909 (Tuesday).

Weather:

M.T. + 37° + 37° at 7.00 a.m. Wind in southwest until 6.00 a.m., dying down just as we reached west sandspit of Barter Island.

Travel:

Made camp here at Ilavinirk's cache and had breakfast. Wind freshened again and we sailed at 9.00 a.m. Wind soon died down and veered to northeast about noon. Landed and made camp on reef northeast

of east end of Barter Island, [off Manning Point] about two miles northwest of mouth of Jags river [Jago River; Leffingwell 1919 Pl. I], Light sprinkling rain at intervals from midnight until about noon. Sunshine all afternoon.

Old-Squaw:

A few Old-Squaws seen swimming in open lagoon. They are unable to fly now, but swim easily away from a boat unless there is a pretty good sailing wind. They dive continually when approached and are very difficult to kill.

Travel:

Everything in my trunk cached near Barter Island was wet and moldy, papers, clothing and some of film negatives, the latter the most valuable.

Weather:

Strong south wind at midnight; tide rising. Dark, cloudy.

Fish:

A few fish caught.

Aiaki and 's boat overtook us about 10 a.m.

August 11th, 1909 (Wednesday).

Weather:

M. T. + 36° + 52° at 11. a.m. up at 4.00, wind southwest, lighter than at midnight. Cloudy.

Travel:

Sailed at 6.00 a.m. Wind southwest gradually stronger until about noon. Passed Humphrey Point at 11.00 a.m. marked by cross inscribed: (Humphrey Point)
(July 26th, 1894) About 4.00 p.m. landed about 6-8
(Hagarty, Bk.) miles east of Humphrey Point, (north
(Triton) of Blaufort Lagoon). See

Caribou:

Nin. saw eight caribou on mainland and all boats put in. No wind. Caribou disappeared before we got to land.

Black-throated Loon; Gull; Longspur:

Saw a few Black-throated Loons, Gulls, Longspurs.

Cloudy all day, bright sunshine after 6.00 p.m.
No fish caught here.

August 12th, 1909 (Thursday).

Weather;

M.T. + 38° + 42° at 8.00 a.m. southwest wind at 5.00 a.m. Sailed at 7.30 a.m., light rain.

Travel:

Sailed by Icy Reef from 10-12 miles. Ice heaped high on shore, with a few open intervals, for several miles. Much floating ice in sea outside. Ice pack about one mile off shore. Saw one seal and Asiatic's boy shot one today. Wind shifted to northeast about 2.30 p.m., and we made camp in a little deep harbor near end of a long sandspit extending west from mainland. Mainland about 2 1/2 miles across lagoon north of point of sandspit (neighborhood of Demarcation Point). Nobody seems to know the exact location of the "Point" (International Boundary, at intersection of 141st meridian with Arctic coast line), or whether it is at bottom of a bay or at a cape. Sailed across mainland in afternoon with Ilavínirk and Stefánsson. (and) evening

Willow Ptarmigan:

Saw a bunch of four Willow Ptarmigan on tundra near coast, killed two females here, and one male not far away. Skinned male #324 Lagopus lagopus.

Saw a few Snowflakes, Longspurs, gulls, one Parasitic Jaeger, and many Old-Squaws.

Old-Squaws:

About a dozen Old-squaws were killed today. Most of them are unable to fly, but some can fly a short distance over the water, fluttering along.

Black-throated Loon:

Sailed near a Black-throated Loon in morning which tried to fly but barely skimmed the surface, making a great splashing, going with the wind. Nin. says that Loons cannot fly up from the water when a strong wind is blowing from behind.

Caribou:

Stefánsson went inland several miles nearly to the mountains (not more than 10 miles from coast at this point.), but saw no caribou. Nin. shot three caribou here last summer, and our party killed one Aug. 18. Ptarmigan.

He saw numbers of Ptarmigan, and one brood of young ones about as big as Meadow Larks

August 13th, 1909 (Friday).

Weather:

M.T. + 36° + 39° at 9.00 a.m. Cloudy. Light rain at intervals all night. Moderate northeast wind.

Fish:

Quite a number of fish (20-30) caught last night, both Whitefish and Salmon Trout (two large Salmon Trout, 5-6 lbs. each.

Seal:

Three boats out sealing today. Billy saw three seals (one Ugruk). Keliguak killed one seal. Dense fog after 10.00 a.m. Ilavinirk came in about 8.00 p.m. with one seal.

Weather:

Fog denser than ever. + 34° at 7.30 p.m.

August 14th, 1909 (Saturday).

Weather:

M.T. + 32° + 45° at 12.00 m. Sailed at 8.15 a.m. with fair southwest wind. Sun came out brightly about 9.00 a.m. and shone until 5.00 p.m. Wind died down about 1.00 p.m. and we went ashore about 2.00 p.m.

Caribou:

About 30 miles west of Herschell Island we saw seven caribou on hill inland.

Travel:

Much floating ice and grounded icebergs, (some 20 feet high), so that we had to be continually dodging them. Entered a little harbor (lagoon) just wide and deep enough for boat entrance. Other boats and crews landed for a little while on large ice bank about half a mile off shore.

Seal:

Saw many seals and shot two, one sinking and lost. The one shot was nearly white, with obscured dusky spots along back. Pikalo shot a young seal (half-grown), which was sleeping on the surface of the water, approaching within ten feet of it. The flesh and blubber of the young seal was very agreeable to the taste, having none of the disagreeable or fishy flavor of the adult seals.

Caribou:

At 2.30 p.m. started after the caribou which were quietly grazing along the side of a long, high ridge, only three or four miles from the mountains, slowly moving eastward. Light northeast wind.

Willow Ptarmigan:

Flushed a male Willow Ptarmigan on tundra.

Western Tree Sparrow:

Crossed a small stony-bottomed creek, with swift current, 2-3 feet deep, and bordered by a narrow tangle of willow shrubs two and three feet high, and some with trunks as thick as an ordinary broom handle much gnarled and bent not more than 1 1/2 miles from coast. Saw three or four Tree Sparrows here, chirping rather loudly and fussily.

Caribou:

Ascended to top of ridge to leeward of deer, and found that they had wandered into a little ravine where a small rivulet had made a strip of green grass. Billy started around to outflank the herd, while the five of us, V.Stefansson, Ilavinirk, Pikalo, Ninak., and myself remained behind the crest of hill. Before Billy could get around to his place, the deer caught sight of N's or Pikalo's head peeking over the top of the hill, and ran away, being at the time about 300 yards away. They did not circle but ran directly with the wind, stopping at about 500 yards for an instant, then swerving northward, over the ridge towards the mountains. One deer was wounded in the fore leg by our volleys and started off alone towards the coast. V.Stefansson and Ilavinirk followed Billy around the ridge, and succeeded in killing one small buck (perhaps two year old), Pikalo and Ninak.. started after the wounded deer, but a dense fog came up soon and they lost the deer, as well as themselves, and did not get in until 6.00 a.m.

We finished skinning the deer and started home at 7.30 p.m. packing the skin and all the meat. Dense fog came up from sea about 8.00 p.m., so that we could not see 100 yards. When we struck the coast we could not tell which way to go. Started east, but after going about half a mile, stopped while V.Stefansson went ahead to explore. He returned in about half an hour, convinced that camp was in the opposite direction. Retraced our steps and reached camp at 11.30 very chilly and wet; cold fog and water freezing.

Caribou skinned for specimen #326 male, measurements: Length (nose to tip of tail 72 1/2 inches; Tail 6. Height at shoulder 40. Depth of chest 17.

Shoulder to hip 34. Girth chest 43. Girth belly (greatest circumference) 47. Girth loins 43. Girth fore leg 12. Girth hind leg 17. Girth neck (behind ears) 19. All the old hair had been shed and the coat was in its prime, very glossy and sleek. The animal was in good condition, but not fat - only a trace of back fat, and some fat around kidneys. Horns in "velvet", but quite hard. Head and face nearly black, sides and shoulders becoming gray. Belly white. Kunasilek saw from camp four other caribou some distance ahead of the seven we were stalking -- all going east.

August 15th, 1909 (Sunday).

Weather:

M.T. + 31 1 2. Northeast wind in forenoon and foggy. Fog cleared about noon and wind died down.

White Whale:

About 2.00 p.m. three or four Beluga (White Whales) passed by, going west, about 200 yards from shore. They often plunged and splashed, showing half the body out of water.

Willow Ptarmigan:

Saw one Willow Ptarmigan near camp.

Red Phalaropes

Saw three Red Phalaropes. The Phalaropes have now moulted the red breast plumage.

Travel:

About 3.00 p.m. a light southwest breeze sprang up and we prepared to sail. Before an hour had passed, wind shifted again to northeast and blew a stiff gale. While wind on coast was still blowing from southwest we could see fog banks on mountain sides moving westward. Am trying to dry out some of the skins collected last summer. Although fairly dry when packed in "Cambridge Cans" inside of wooden chests, they are somewhat damp now, and a number of skins have patches of green mould, particularly around the head and feet. Southwest wind after 9.00 p.m. Cloudy and dark.

August 16th 1909 (Monday).

Weather:

M. T. + 38° + 43° at 12 m. Southwest wind in early morning. Wind shifted to northeast about 3.00 a.m. and blew strongly from that quarter all day. Bright sunshine.

Caribou:

Took umiak out of water and dried it. Finished preparation of caribou skin and head. Ningakshuk succeeded in killing the caribou wounded two days before, and brought in skin, cacheing the meat about three miles east along the coast, and "not far" inland. Everybody out looking for caribou today, but none were seen.

Travel:

A two-masted schooner was sighted at east end of lagoon several miles to westward, about 6.00 p.m., but too far away to identify.

Black Brant:

A flock, about a dozen, Black Brants flew west along the beach about 7.00 p.m., the first Brants seen for sometime, although flocks of ducks are occasionally seen going west.

August 17th, 1909 (Tuesday).

Weather:

M.T. + 35 + 45 at 12 m. Very light southwest wind for a little while in early morning. Up at 3.00 a.m. Northeast wind last night had nearly cleared sea of ice to eastward, but packed it near mouth of lagoon to westward.

Travel:

Schooner seems a little nearer, beating its way far out from shore. Stefansson decided to go ahead with umiak to Herschell Island in order to be sure and catch the ship. Billy and Fannigablek accompanied Stefansson, taking three dogs. We were unable to get the sloop and whaleboats out, grounded on account of low tide. V. Stefansson got away about 7.00 a.m. and had light southwest wind for about half an hour. Then almost calm until 2.00 p.m. Ship worked in within 1/2 miles of shore, and tide having risen, we got out about 12.30 p.m. and rowed over to the ship the "Challenge Unalaska". Capt. Theodore Pedersen twelve days out from Point Barrow. Reports sea fairly open. Two whalers were at Cape Smythe when he left, the "Jennie" and the "Karluk". The "Karluk" had mail for us, but Pedersen did not bring it. Leffingwell said to be on way up the coast with a sloop (gasolene ?) and a big outfit.

Pedersen caught 3000 lbs. whalebone; 9 foot bone last spring.

Travel:

Captain Wm. Mogg still in South Bay with "Olga" on August 9th, but expected to outfit at Point Barrow and come east before it freezes up. We worked about three miles west by tacking and rowing, and entered a little lagoon, with narrow four foot entrance, at mouth of creek called Ava-v(w)ik'. Brought in meat from cache. Ningakshuk shot a seal which stuck its head up within ten feet of boat. Four Whitefish caught in gill net at entrance to lagoon in evening. Two schools of fish seen swimming in lagoon.

Phalarope:

Phalaropes numerous in water along shore, swimming about, continually bobbing the head and neck, and often picking up something floating morsel on the surface with a motion so quick as to be difficult to detect.

Weather:

Sunshine all afternoon and evening. Sunset at 6.00 p.m.

August 18th, 1909 (Wednesday).

Weather:

M. T. + 28 + 38 at 8. a.m. Northeast wind. Light fog.

Fish:

Fifteen good sized Whitefish and one Salmon Trout in net this morning.

Wind shifted to southwest about 9.00 a.m.

Dense fog.

Travel:

Sailed a little after nine, but fog soon cleared away and wind died down. Worked along 2 or 3 miles mostly by paddling; landed on a grounded ice floe about 1/2 mile from land. Dipped up a few buckets of fresh water from holes melted in ice on top of floe.

Caribou:

Ningakshuk sighted some caribou on mainland (about a mile from coast), with naked eye. Made a landing in mouth of a little rocky bottomed creek. Landed about 12 M. (bright sunshine, light northeast wind, and a few mosquitoes out). Followed bed of

creek north for about a mile and found that caribou had apparently moved east. Crossed a long low ridge and saw five caribou feeding in bottom of a narrow creek valley with high, steep earth and gravel banks (mixed with some shale or slate). Ilavinirk and Ningakshuk started to work, down the creek, while Pikalo and I ran around to the top of ridge to eastward to cut off retreat in that direction. Just as we reached the top of the hill, a "valley" rang out just below us and we soon saw four deer break out about 300 yards further down (one female wounded and dropped at first fire). The deer did not stop for some time, although we fired a number of times, but ascended to a higher ridge to the eastward, making a half circle around us. I fired one shot at 525 yards (paced) and one deer dropped instantly in its tracks, lay quite still for about two minutes, then got up and made off towards the coast. The other three kept going south towards the higher foothills. We fired a few shots and another young deer dropped about 300 yards beyond the point at which we ceased firing. I started after my wounded deer and hunted for several hours, but lost the trail and had to give up. Ningakshuk started after the other two deer and succeeded in killing both (females) near top of first large foothill, about 3-4 miles from the coast. Mamoyouk had started from the boats with a string of pack dogs and with Ilavinirk and Pikalo got the skins and meat of their two deer down to the boats by 7.00 p.m. Ilavinirk said that his female deer was wounded badly, and when he approached, rose up and tried to attack him using her horns, so that he was obliged to shoot her again.

Travel:

Ilavinirk and Pikalo sailed about 9.00 p.m. against light northeast wind, intending to camp in a harbor at point about five miles further east. Tide had fallen so we had difficulty in getting the whale-boats out, sloop was immovable. Ningakshuk and wife returned with their booty about midnight.

Caribou:

One of Ningakshuk's female deer (a large one) was very fat, - had a mass of "back-fat" 3 4 to one inch thick and about two feet by one foot in size. Fat on ribs about 3/8 inches thick. Ilavinirk's deer also had a quantity of back fat. "The "Back-fat" has enough fascia tissue to hold it together when boiled, and being considered the choicest portion, naturally went into the pot at once.

Willow Ptarmigan:

Saw a few single Willow Ptarmigans on hills and got into the midst of a flock of three or four grown birds and a half a dozen half-grown young. They ran along the ground ahead of us at about 10 yards and Pikalo tried to kill some by throwing his hunting knife. When pressed too closely, the birds would fly 20-50 yards further on.

Redpoll:

Saw a number of Redpolls in willows along creek about one mile from coast.

American Pipits:

Saw numbers of American Pipits along creek and on upland tundra.

Snowflakes; Lapland Longspurs

Saw a few Snowflakes, and Lapland Longspurs.

Parasitic Jaeger:

Saw a pair of Parasitic Jaegers.

August 19th, 1909 (Thursday).

Weather:

M. T. + 35 + 35° at 3.00 a.m. + 33° at 3.00 p.m.
Sunrise 3.15 a.m. Very light southwest wind started up at sunrise. Tide had risen at least 12 inches since 9.00 p.m.

Travel:

Sailed 4.00 a.m. and reached next harbout at 6.00 a.m. Waked Ilavinirk and Pikalo. Four of my dogs had run away last night and followed whaleboat along beach. Three were here but "Lindy" was lost. I started back at once went some distance beyond old camp but saw no dog. Returned at 11.00 a.m. and about half an hour later "Lindy" strolled in from mainland where he had been hunting on his own account. Lost six hours of fine sailing wind. Started again at 12 M. with freshening northwest wind. Gale gradually grew stronger, waves breaking over whaleboats, etc., dogs seasick, and we made into the little harbor entrance to big lagoon, just east of conspicuous hill on coast called Nunaluk, about 10 miles southwest of Herschell Island. Entrance to harbor very narrow (but deep), with dangerous reef in east side. 40 feet sloop nearly stood on beam ends when we looked to run in. After rounding point, anchor dragged and we were unable to row sloop to land. Ilaninirk came out in

Kayak, made line fast and hauled us in. Waves splashing over ice-cakes, 10 feet out of water.

Plants:

Pressed specimens of "Kong-a-rit", a plant with tender, succulent, slightly acid, heart-shaped leaves bearing raceme of small brownish flowers; and of "I-rity", a plant with leaves like willow and pink flowers cluster; both plants eaten as relish by Eskimos. Usually a little seal oil is poured over a pan of the leaves, and they are eaten as we would eat lettuce.

Snow Geese:

A flock of 15-20 Snow Geese flew west about 7.00 a.m.

Marsh Hawk:

A single Marsh Hawk (*Circus hudsonius*) flew not more than twenty feet over my head, young bird with breast rich rufous.

August 20th, 1909 (Friday).

Weather:

M.T. + 30° + 35° at 9.00 a.m. Howling gale, still blowing from northwest. Steamer "Karluk" appeared to west about 9.30 a.m. Snowflakes lying thickly for a few minutes about 3.30 p.m. Wind strong in W.N.W. at 5.00 p.m. sun shining faintly.

August 21st, 1909 (Saturday).

Weather:

M.T. + 28° + 33° at 9.00 a.m. Cloudy. Wind in northwest stronger than yesterday. Big waves. Flock 100. Black Brants flew southwest in morning. Ground white with snow. Herschell Island white with snow; mountains without snow.

Red Phalarope:

Saw several Red Phalaropes riding breakers, sailing over "head on" or skipping lightly over a curler.

Large flocks of Black Brants flew over in afternoon.

Travel:

Wind moderated about 6.00 p.m. "Ivan" ran away, delaying sailing until 8.00 p.m. Light northwest wind, but heavy swell. Wind shifted to southwest

at 9.00 p.m.. Passed southwest sandspit of Herschell Island at 9.45 p.m. and reached Flanders Point at 11.00 p.m. Southwest wind strong. About eight tents here, stayed 2 1/2 hours until daylight. Somewhat foggy + 30° at 11.00 p.m. Snow flying.

